

 $+$

6A1 VH

6A1	EVQLVQSGAEVKKPGESLTISCKGSGYNFF	NYWIG	WVRQMPGKGLEWMG
Vh5 DP-73	EVQLVQSGAEVKKPGESLKISCKGSGYSFT	SYWIG	WVRQMPGKGLEWMG

6A1	<u>TYPTDSDTRYSPSFQG</u>	<u>QVTISVDKSI</u> STAYLQWSSLKASDTAMYCAR	<u>SI</u>
Vh5	DP-73	5-51	..

[illegible]

6A1 VL

	SSELTQDPAVSVALGQTVRITC	<u>OGDSLRSYYAS</u>	<u>WYQQKPGQAPLVLY</u>	<u>GK</u>
6A1	SSELTQDPAVSVALGQTVRITC	<u>OGDSLRSYYAS</u>	<u>WYQQKPGQAPLVLY</u>	<u>GK</u>
Vlamba3	DPL16	31		
Vlamba3	DPL16	31		

6A1	NKRPS	GIPDRFSGSSGNTASLTITGAQAEDEADYYC	HSRDSSSGNHVL
v1ambda3	DPL16	31	HSRDSSSGNHVL

	GT	KL	TVLGA	110	SEQ	ID NO:
6A1						109
vlambda3	DPL16	31				151

FIG. 1B

7A2 VH

7A2 Vh5_DP-73__5-51_ 50
 GVQLVQSGAEVKKPGESL**T**ISCKGSGY**NFF** **NYWIG** WVRQMPGKGLEWMG **I**
EVQLVQSGAEVKKPGESL**K**ISCKGSGY**SFT** **SYWIG** WVRQMPGKGLEWMG **I**
 7A2 Vh5_DP-73__5-51_ 100
IYPTDSDTRYSPSFQ **BVTISVDK**SISTAYLQWSSLKASDTAMYYCAR **SI**
IYPGDSDTRYSPSFQ **QVTISA**DKSISTAYLQWSSLKASDTAMYYCAR ..
 7A2 Vh5_DP-73__5-51_ 110
RYCPGGRCYSGYGM**DV** WGQGTMTVSS 128 SEQ ID NO:110
 WGQGTMTVSS JH3 SEQ ID NO:144

7A2 VL

7A2 Vlambda3_DPL16__31_ 50
 SSELTQDPAVSVALGQTVRITC **QGD**SLRSYY**TN** **WFQ**QKPGQAP**LLVVY** **AK**
 SSELTQDPAVSVALGQTVRITC **QGD**SLRSYY**AS** **WY**QKPGQAP**VLVIY** **GK**
 7A2 Vlambda3_DPL16__31_ 100
NKRPS GIPDRFSGSSSGNTASLTITGAQAEDEADYYC **NSRDSSGNHVV** FG
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADYYC **NSRDSSGNHVV** FG
 7A2 Vlambda3_DPL16__31_ 110
 GGTKLTVLGA 110 SEQ ID NO:111
 GGTKLTVL.. JL3 SEQ ID NO:151

FIG. 1C

7A4 VH

7A4 EVQLVQSGAEVKKPGESL**T**IISCKGSGY**NFF** **I**NYWIG WVRQMPGK**D**LEWMG **I** 50
Vh5_DP-73__5-51_
EVQLVQSGAEVKKPGESL**K**IISCKGSGY**SFT** **I**SYWIG WVRQMPGK**G**LEWMG **I**
7A4 **I**YPTDSDTRYSPS**FOG** QVTIS**V**DKSISTAYLQWSSLKASDTAMYYCAR **SI** 100
Vh5_DP-73__5-51_
IYPGDSDDTRYSPS**FOG** QVTIS**A**DKSISTAYLQWSSLKASDTAMYYCAR ..
7A4 **I**YCPGGRCYSGYYGMDV WGQGTMTVTVSS 128 SEQ ID NO:112
Vh5_DP-73__5-51_
..... WGQGTMTVTVSS JH3 SEQ ID NO:144

7A4 V

7A4 SSELTQDPAVSVALGQTVRITC **R**GD**S**LRNYYAS WYQQKPGQAPV**LVIY** **GK** 50
Vlambda3_DPL16__31-SSELTQDPAVSVALGQTVRITC **Q**GD**S**LR**S**YYAS WYQQKPGQAPV**LVIY** **GK**
7A4 **N**NRPS GIPDRFSGSSSGNTASLTITGAQA**E**DEADY**C** **N**SRDSSGN**H**MV FG 100
Vlambda3-DPL16-31-
NNRPS GIPDRFSGSSSGNTASLTITGAQA**E**DEADY**C** **N**SRDSSGN**H**VV FG
7A4 GGTKLTVLGA 110 SEQ ID NO: 113
Vlambda3-DPL16-31-
GGTKLTVL.. JL3 SEQ ID NO: 151

FIG. 1D

7A5 VH

7A5 GVLV**ES**GAEVKKPGESL**T**ISCKGSGY**NFF** **N**XW**I**G WVRQMPGKGLEWMG **I** 50
 Vh5_DP-73__5-51 **E**VQLV**Q**SGAEVKKPGESL**K**ISCKGSGY**SFT** **S**YW**I**G WVRQMPGKGLEWMG **I**

7A5 **I**YPTDSDTRYSPS**FOG** QVTIS**V**DKSISTAYLQWSSLKASDTAMYYCAR **S**I 100
 Vh5_DP-73__5-51 **I**YPGDS**D**TRYSPS**FOG** QVTIS**A**DKSISTAYLQWSSLKASDTAMYYCAR ..

7A5 **R**YCPGGRCYSGYYGMD**V** WGRGTLVTVSS 128 SEQ ID NO:114
 Vh5_DP-73__5-51 WGRGTLVTVSS JH2 SEQ ID NO:145

7A5 VL

7A5 SSEL**T**QDPAVSVALGQTVRITC **Q**GDSLRSYYAS WYQ**Q**KPGQAPVLVIY **C**K 50
 Vlambda3_DPL16__31_ SSEL**T**QDPAVSVALGQTVRITC **Q**GDSLRSYYAS WYQ**Q**KPGQAPVLVIY **G**K

7A5 **N**NR**P**S GIPDRFSGSSSGNTASLTITGAQA**E**DEADYYC **N**SRDSSGNH**V**V FG 100
 Vlambda3_DPL16__31_ **N**NR**P**S GIPDRFSGSSSGNTASLTITGAQA**E**DEADYYC **N**SRDSSGNH**V**V FG

7A5 GGTKLTVLGA 110 SEQ ID NO: 115
 Vlambda3_DPL16__31_ GGTKLTVL.. JL3 SEQ ID NO: 151

FIG. 1E

7A6 VH

7A6 EVQLVQSGAEVKKPGESL**T**ISCKGSGY**NFF** **NYWIG** WVRQMPGKGLEWMG **I** 50
Vh5_DP-73__5-51__ EVQLVQSGAEVKKPGESL**K**ISCKGSGY**SFT** **SYWIG** WVRQMPGKGLEWMG **I**
7A6 **IYPTDSDTRYSPSFOG** QVTIS**VD**KSISTAYLQWSSLKASDTAMYCAR **SI** 100
Vh5_DP-73__5-51__ **IYPGDSDTRYSPSFOG** QVTIS**AD**KSISTAYLQWSSLKASDTAMYCAR ..
7A6 **RYCPGGRCYSGYYGMDV** WGQGLVTVSS 128 SEQ ID NO:116
Vh5_DP-73__5-51__ WGQGLVTVSS JH5 SEQ ID NO:146

7A6 VL

7A6 SSELTDQDPAVSVALGQTVRITC **QGD**SLRSYYTN **WFQ**QKPGQAP**LLV**VY **AK** 50
Vlambda3_DPL16__31__ SSELTDQDPAVSVALGQTVRITC **QGD**SLRSYYAS **WYQ**QKPGQAP**VL**VY **GK**
7A6 **NKRPS** GIPDRFSGSSSGNTASLTITGAQAEDADYYC **NSRD**SSGNHVV FG 100
Vlambda3_DPL16__31__ **NNRPS** GIPDRFSGSSSGNTASLTITGAQAEDADYYC **NSRD**SSGNHVV FG
7A6 GGTKLTVL 108 SEQ ID NO:117
Vlambda3_DPL16__31__ GGTKLTVL JL3 SEQ ID NO:151

FIG. 1F

8A1 VH

8A1 EVQLVQSGAEVKKPGESL**T**ISCKGPGY**NFF** NYWIG WVRQMPGKGLEWMG **I** 50
Vh5_DP-73__5-51_
EVQLVQSGAEVKKPGESL**K**ISCKGSGY**SFT** SYWIG WVRMPGXGLEWMG **I**

8A1 **IYPTDSDTRYSPSFQG** QVTIS**V**DKSISTAYLQWSSLKASDTAMYCAR **SI** 100
Vh5_DP-73__5-51_
IYPGDSDTRYSPSFQ**G** QVTIS**A**DKSISTAYLQWSSLKASDTAMYCAR ..

8A1 **RYCPGGR**CYSGYYGMD**V** WGQGTMTVSS 128 SEQ ID NO:118
Vh5_DP-73__5-51_
..... WGQGTMTVSS JH3 SEQ ID NO:144

8A1 VL

8A1 SSELTDQPAVSVALGQTVRITC **Q**GDSLRSYYAS WYQQKPGQAPVLVIY **GK** 50
Vlambda3_DPL16__31_
SSELTDQPAVSVALGQTVRITC **Q**GDSLRSYYAS WYQQKPGQAPVLVIY **GK**

8A1 **NNRPS** GIPDRFSGSSSGNTASLTITGAQAEDADYYC **NSRDSSGNHVV** FG 100
Vlambda3_DPL16__31_
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC **NSRDSSGNHVV** FG

8A1 GGTKLTVLGA 110 SEQ ID NO:119
Vlambda3_DPL16__31_
GGTKLTVL.. JL3 SEQ ID NO:151



FIG. 1G

9A2 VH

9A2 Vh1_DP-14__1-18_ QVQLVQSGAEV**R**KPGASVKV**S**CK**T**SGYT**F**R **N**YD**I**N WVRQAPGQGLEW**M**G **R** 50
 QVQLVQSGAEV**K**KPGASVKV**S**CK**A**SGYT**F**T **S**Y**G**I**S** WVRQAPGQGLEW**M**G **W**

9A2 Vh1_DP-14__1-18_ **I**SGHYGNTD**H**AQ**K**FO**G** **R****F**TM**T**K**D**TSTSTAYMELRSL**T**FDDDTAVYYCAR **S**Q 100
ISAYNGNTN**Y**AQ**K**LOG **R****V**TM**T****T**DTSTSTAYMELRSL**R**SDDDTAVYYCAR . .

9A2 Vh1_DP-14__1-18_ **W**NVD**Y** WGRGTLVTVSS 116 SEQ ID NO:120
 WGRGTLVTVSS JH2 SEQ ID NO:147

9A2 VL

9A2 Vlambda6_6a NFMLTQPHSVSESPGKTVTIS**C** **T**RSSGS**I**AS**N**Y**V**Q WYQQRPGSSPTTV**I****F** 50
 NFMLTQPHSVSESPGKTVTIS**C** **T**RSSGS**I**AS**N**Y**V**Q WYQQRPGSSPTTV**I****Y**

9A2 Vlambda6_6a **E**DNRR**R**PS GVPDRFSGSID**T**SSNSASLTISGLKTEDEAD**Y**YC **Q**SFDST**N**L**V** 100
EDN**Q**RPS GVPDRFSGSID**S**SSNSASLTISGLKTEDEAD**Y**YC **Q**SYDSS**N**L**V**

9A2 Vlambda6_6a **V** FGGG**T**KLTVLGA 113 SEQ ID NO:121
V FGGG**T**KLTVL.. JL2/JL3 SEQ ID NO:152

FIG.1H

11A1 VH

11A1 Vh3_DP-50__3-33_ 50

EVQLVESGGGVQPGRSLRLSCAASGFTFS DFAMH WVRQIPGKGLEWLS G
QVQLVESGGGVQPGRSLRLSCAASGFTFS SYGMH WVRQAPGKGLEWVA V

11A1 Vh3_DP-50__3-33_ 100

LRHDGSTAYYAGSVKG RFTISRDNSRNTVYLQMNSLRAEDTATYYCVT GS
IWYDGSNKYYADSVKG RFTISRDNKNTLYLQMNSLRAEDTAVYYCAR..

11A1 Vh3_DP-50__3-33_ SEQ ID NO:122
GSSGPHAFPV WGKGTLVTSS 121
 WGQGLTVTSS JH1/JH4/JH5 SEQ ID NO:148

*Vernier residue

11A1 VL

11A1 Vlambdal_DPL2__1c_ 50

SYVLTQPPSASGTPGQRTISC SGSNSNIGTYTVN WFQQLPGTAPKLLIY
QSVLTQPPSASGTPGQRTISC SGSSSNIGSNTVN WYQQLPGTAPKLLIY

11A1 Vlambdal_DPL2__1c_ 100

SNNQRPS GVPDRFSGSKSGTSASLAISGLQSEDEADYYC AAWDDSLNGPV
SNNQRPS GVPDRFSGSKSGTSASLAISGLQSEDEADYYC AAWDDSLNGPV

11A1 Vlambdal_DPL2__1c_ SEQ ID NO:123
 FGGGTKVTVLGA 112
 FGTGTKVTVL... JL1 SEQ ID NO:154

FIG. 11

11A2 VH

11A2 EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A 50

Vh3_DP-47__3-23_ EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A

11A2 ISGSGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK GM 100

Vh3_DP-47__3-23_ ISGSGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK ..

11A2 GYYGSGGYYPDDAFDV WGQGTMTVSS 127 SEQ ID NO:124

..... WGQGTMTVSS JH3 SEQ ID NO:149

11A2 VL

11A2 SSELTQDPPDVSMALGQTVTTISC RGDSLKRIFYAS WYHQKPGQAPVLVFY GK 50

Vlambda3-DPL16-31- SSELTQDPPAVSVALGQTVRITC QGDSLRSYYAS WYQKPGQAPVLVIY GK

11A2 ENRPS GIPDRFSGSDSGDTASLTITGAQAEDEGDYYC HTQDTSARQYV FG 100

Vlambda3-DPL16-31- NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNHVV FG

11A2 SGTKVTVLGA 110 SEQ ID NO:125

Vlambda3-DPL16-31- TGTKVTVL.. JL1 SEQ ID NO:153

FIG.1J

11A3 VH

Query Vh1_DP-14__1-18_ EVQLVQSGAEVKKPGASVKVSCKASGY**S**FT **NYGLN** WVRQAPGQGLEWMG **W** 50
QVQLVQSGAEVKKPGASVKVSCKASGY**T**FT **SYGIS** WVRQAPGQGLEWMG **W**
 Query Vh1_DP-14__1-18_ **I**SPYTG**Y**TNYAOK**F**OG RVVTMT**D**KSTSTAYM**D**LRSLRSDDTAVYYCAR **EI** 100
ISAYNGNTNYAOK**L**QG RVVTMT**D**TSTSTAYM**E**LRSLRSDDTAVYYCAR ..
 Query Vh1_DP-14__1-18_ **F**SHCTGGSCYP**F**DS WGRGTLVTVSS 125 SEQ ID NO:126
 Vh1_DP-14__1-18_ WGRGTLVTVSS JH2 SEQ ID NO:147

11A3 VL

Query Vlambda3_DPL16__31- SSELTQDPAVSVALGQTVRITC **Q**GDSL**R**NY**Y**AS **W**YQ**Q**KPGQAP**L**L**V**M**F** **GK** 50
 SSELTQDPAVSVALGQTVRITC **Q**GDSL**R**SY**Y**AS **W**YQ**Q**KPGQAP**V**L**V**I**Y** **GK**
 Query Vlambda3_DPL16__31- **NNR**P**S** **E**IPGRFSGSSSGNTASLTITGAQAEDEAD**Y**YC **NSR**DRNS**H**OW**V** FG 100
NNRP**S** **G**IPDRFSGSSSGNTASLTITGAQAEDEAD**Y**YC **NSR**DSSSGN**H**V**V** FG
 Query Vlambda3_DPL16__31- GGTKLTVLGA 110 SEQ ID NO:127
 GGTKLTVL.. JL3 SEQ ID NO:151

FIG. 1K

11A4 VH

11A4 EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A 50
 Vh3_DP-47__3-23_
 EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A *
 11A4 ISGGSGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAS SP 100
 Vh3_DP-47__3-23_
ISGGSGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK ..
 11A4 YSSRWYSFDP WGQGTMTVTVSS 121 SEQ ID NO:128
 Vh3_DP-47__3-23_
 WGQGTMTVTVSS JH3 SEQ ID NO:149

* Vernier residue

11A4 VL

11A4 SYELTQPPSVSVSPGQTATITC SGDDLGNKYVS WYQQKPGQSPVLVIY QD 50
 Vlambda3_DPL23__3r_
 SYELTQPPSVSVSPGQTASITC SGDKLGDKYAC WYQQKPGQSPVLVIY QD
 11A4 TKRPS GIPERFSGSNSGNIATLTISGTQAVDEADYYC QVWDTGTVV FGGG 100
 Vlambda3_DPL23__3r_
SKRPS GIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTA. FGGG
 11A4 TKLTVLGA 108 SEQ ID NO:129
 Vlambda3_DPL23__3r_
 TKLTVL.. JL3 SEQ ID NO:155

FIG.1L

11A5 VH

Query
Vh1_DP-14__1-18_ 50
QVQLVQSGAEVKKPGASVKVSCKASGYSFT NYGLN WVRQAPGQGLEWMG W
QVQLVQSGAEVKKPGASVKVSCKASGYTFT SYGIS WVROAPGQGLEWMG W

Query 100
Vh1_DP-14__1-18_
ISPYTGYTNYAOKFQG RVTMTTDDKSTSTAYMDLRLSLRSDDDTAVYYCAR EI
ISAYNGNTNYAOKLQG RVTMTTDDTSTSTAYMELRLSLRSDDDTAVYYCAR ..

Query
Vh1_DP-14__1-18_
FSHCTGGSCYPFDS WGKGTLVTVSS 125 SEQ ID NO:130
..... WGQGTLVTVSS JH1 SEQ ID NO:145

11A5 VL

Query 50
Vlambda3_DPL16__31_
SSELTQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK
SSELTQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK

Query 100
Vlambda3_DPL16__31_
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNHHWV F
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNH... F

Query
Vlambda3_DPL16__31_
QGGGTKVTVLGA 111 SEQ ID NO:131
GGGTKLTVL... JL3 SEQ ID NO:151

FIG.1M

11A11 VH

11A11 QVQLVESGGGLVKPGGSLRLSCAASGFTFS SHTMN WVRQAQKGLEWVS S 50
 Vh3_DP-77__3-21_ EVQLVESGGGLVKPGGSLRLSCAASGFTFS SHTMN WVRQAQKGLEWVS S

11A11 ISGSGRYIYYSDSVKG RFTISRDAAKNSLYLQMNNLRAEDTAVYYCTR AK 100
 Vh3_DP-77__3-21_ ISSSSYIYYADSVKG RFTISRDNAAKNSLYLQMNSLRAEDTAVYYCAAR ..

11A11 FGDYLFDS WGQGTLVTVSS 119 SEQ ID NO:132
 Vh3_DP-77__3-21_ WGQGTLVTVSS JH1/JH4/JH5 SEQ ID NO:150

11A11 VL

11A11 NFMLTQPHSVS QSPGKTVTISC TRSSGRIASNFVQ WYQORPGSAPTTVIY 50
 Vlambda6_6a NFMLTQPHSVS ESPGKTVTISC TRSSGSIASNYVQ WYQORPGSSPTTVIY

11A11 EDNRRPS GVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC QSYDARYQV 100
 Vlambda6_6a EDNQRP GVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC QSYDSSN..

11A11 FGTGTKVTVLGA 112 SEQ ID NO:133
 Vlambda6_6a FGTGTXVTVL.. JL1 SEQ ID NO:156

FIG. 1N

11A1 2 VH

11A12 EVQLLESGGGLVQPGGSLRLSCAASGFTVS SYAMS WVRQAPGKGLEWVS A 50
 Vh3_DP-47__3-23_ EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A
 11A12 ISGSGGSTYYADSVKG RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR SP 100
 Vh3_DP-47__3-23_ ISGSGGSTYYADSVKG RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAK ..
 11A12 VPPWADWYFDY WGRGTMVTVSS 123 SEQ ID NO:134
 Vh3_DP-47__3-23_ WGQGTMTVSS JH3 SEQ ID NO:149

* Vernier residue

11A12 VL

11A12 QAVLTQPSSVSGAPGQRTISC TGSRSNFGAGYDVH WYQQFPGTAPKLLI 50
 Vlambdal_DPL8__1e_ QSVVTQPPSVSGAPGQRTISC TGSSSNIGAGYDVH WYQQLPGTAPKLLI
 11A12 Y GNTNRPS GVPDRFSGSRSGTSASLAITGLQAEDEADYYC QSYDSNLSGS 100
 Vlambdal_DPL8__1e_ Y GNSNRPS GVPDRFSGSKSGTSASLAITGLQAEDEADYYC QSYDSSLG..
 Query V FGGGTKVTVLGA 113 SEQ ID NO:135
 Vlambdal_DPL8__1e_ FGTGTKVTVL.. JL1 SEQ ID NO:157

FIG. 10

12A1 VH

12A1 EVQLVQSGAEVKKPGASVKVSCKASGYSFT NYGLN WVRQAPGQGLEWMG W 50
 Vh1_DP-14__1-18_ QVQLVQSGAEVKKPGASVKVSCKASGYTFT SYAMS WVRQAPGQGLEWMG W

12A1 ISPYTGYTNYAOKFOG RVTMTTDKSTSTAYMDLRSLRSDDTTAVYYCAR EI 100
 Vh1_DP-14__1-18_ ISAYNGNTNYAOKLOG RVTMTTDTSTSTAYMELRSLRSDDTTAVYYCAR ..

12A1 FSHCTGGSCYPFDS WGKGTLVTVSS 125 SEQ ID NO:136
 Vh1_DP-14__1-18_ WGQGTMVTVSS JH1 SEQ ID NO:147

12A1 VL

12A1 SSELTDQDPAVSVALGQTVRITC QGDSLRNYYAS WYQQKPGQAPVLVLY SK 50
 Vlambda3_DPL6__31_ SSELTDQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVLY GK

12A1 NSRPS GVPD~~RF~~SGSSSGTASLTISGAQAEDEADYYC NSRDTSGDLRWV F 50
 Vlambda3_DPL6__31_ NNRPS GIPD~~RF~~SGSSSGNTASLTITGAQAEDEADYYC NSRDSSGNH... F 100

12A1 GGGTKLTVLGA 111 SEQ ID NO: 137
 GGGTKLTVL.. JL3 SEQ ID NO: 151

FIG. 1P

11A7 VH

11A7
Vh1_DP-14__1-18_ 50
EVQLVQSGAEVKKPGASVKVSKASGY**S**FT **NYGLD** WVRQAPGQGLEWMG **W**
QVQLVQSGAEVKKPGASVKVSKASGY**L**FT **SYGIA** WVRQAPGQGLEWMG **W**

11A7
Vh1_DP-14__1-18_ 100
ISPYTGYTNYAQKFQG RVTMTTDD**K**STSTAYMD**L**RLSLRSDDTAVYYCAR **EI**
ISAYNGNTNYAQKLQG RVTMTTDD**T**STSTAYM**E**LRLSLRSDDTAVYYCAR . .

11A7
Vh1_DP-14__1-18_ 50
FSHCTGGSCYPFDS WGRGT**M**VTVSS 125 SEQ ID NO:136
..... WGRGT**L**VTVSS JH2 SEQ ID NO:147

11A7 VL

11A7
Vlambda3_DPL16__31_ 50
SSELTQDPAVSVALGQTVRITC **QGD**SLRSYYAS WYQQKPGQAPVLVIY **GK**
SSELTQDPAVSVALGQTVRITC **QGD**SLRSYYAS WYQQKPGQAPVLVIY **GK**

11A7
Vlambda3_DPL16__31_ 100
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADYYC **NSRDSSSGNHRNWV**
NNRPS IPDRFSGSSSGNTASLTITGAQAEDEADYYC **NSRDSSSGNH...**

11A7
Vlambda3_DPL16__31_ 112 SEQ ID NO:137
FGGGTK**V**VLGA JL3 SEQ ID NO: 151
FGGGTK**L**TVL..

FIG.1Q

12A2 VH

12A2 EVQLVQSGAEVKKPGASVKVSCKASGYSTFT NYGLN WVRQAPGQGLEWMG 50
Vh1_DP-14 1__18_ QVQLVQSGAEVKKPGASVKVSCKASGYTFT SYGIS WVRQAPGQGLEWMG W

12A2 ISPYTGYTNYAOKFOG RVTMTTDKSTSTAYMDLRLSLRSDDTAVYYCAR EI 100
Vh1_DP-14 1__18_ ISAYNGNTNYAOKLQG RVTMTTDTSTSTAYME LRLSLRSDDTAVYYCAR ..

12A2 FSHCTGGSCYPFDS WGQGLVTVSS 125 SEQ ID NO:138
Vh1_DP-14 1__18_ WGQGLVTVSS JH1 SEQ ID NO:147

12A2 VL

12A2 SSELTDQDPAVSVALGQTVRITC QGDSLRLNYYAS WYQQKPGQAPLLVMF GK 50
Vlambda3_DPL16__31_ SSELTDQDPAVSVALGQTVRITC QGDSLRLSYYAS WYQQKPGQAPVLVIY GK

12A2 NNRPS EIPGRFSGSSSGNTASLTITGAQAEDAADYYC NSRDSNSHQWV FG 100
Vlambda3_DPL16__31_ NNRPS GIPDRFSGSSSGNTASLTITGAQAEDAADYYC NSRDSGSGNH.. FG

12A2 GGTKLTVLGA 110 SEQ ID NO:139
Vlambda3_DPL16__31_ GGTKLTVL.. JL3 SEQID NO:151

FIG. 1R

12A3 VH

12A3
Vh1_DP-14__1-18_ 50
QVQLVQSGAEVKKPGASVKVCKASGYSFT NYGLN WVRQAPGQGLEWMG W
QVQLVQSGAEVKKPGASVKVCKASGYTFT SYGIS WVRQAPGQGLEWMG W
12A3
Vh1_DP-14__1-18_ 100
ISPYTGYTNYAQKFQ RVTMTSDKSTSTAYMDLRLSLRSDDTAIYYCAR EL
ISAYNGNTNYAQKLQ RVTMTTDTSTSTAYMELRLSLRSDDTAVYYCAR ..
12A3
Vh1_DP-14__1-18_ 140
FSHCSGGSCYPFDY WGQGTLVTVSS 125 SEQ ID NO:140
..... WGQGTLVTVSS JH1 SEQ ID NO:147

12A3 VL

12A3
Vlambda3_DPL16__31_ 50
SSELTQDPAVSVALGQTVRITC QGDSLRSYAS WYQKPGQAPLLVIIY GR
SSELTQDPAVSVALGQTVRITC QGDSLRSYAS WYQKPGQAPVLVIY GK
12A3
Vlambda3_DPL16__31_ 100
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSTNHGNWV
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSTNH...
12A3
Vlambda3_DPL16__31_ 141
FGGGTQLTVLSA 112 SEQ ID NO:141
FGGGTQLTVL.. JL7 SEQID NO:157

FIG. 1S

12A4 VH

12A4
Vh1_DP-14__1-18_ 50
QVQLVQSGAEVKKPGASVKVCKASGY**S**FT **NYGLN** WVRQAPGQGLEWMG **W**
QVQLVQSGAEVKKPGASVKVCKASGY**T**FT **SYGIA** WVRQAPGQGLEWMG **W**

12A4
Vh1_DP-14__1-18_ 100
ISPYTGYTN**YAQ**K**FQ**G RVTMTTDD**K**STSTAYM**D**LLRSLRSDDDTAVYCAR **EI**
ISAYNGNTN**YAQ**K**LQ**G RVTMTTDD**T**STSTAYM**E**LLRSLRSDDDTAVYCAR ..

12A4
Vh1_DP-14__1-18_
FSHCTGGSCYPFDS WGRGT**M**VTVSS 125 SEQ ID NO:142
..... WGRGT**L**VTVSS JH2 SEQ ID NO:146

12A4 VL

12A4
Vlambda3_DPL16__31_ 50
SSELTQDPAVSVALGQTVRITC **QGD**SLRSY**YAS** WYQQKPGQAPVLVIY **GK**
SSELTQDPAVSVALGQTVRITC **QGD**SLRSY**YAS** WYQQKPGQAPVLVIY **GK**

12A4
Vlambda3_DPL16__31_ 100
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADY**Y**C **NSRDSSGNL**NWV F
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADY**Y**C **NSRDSSGNH**... F

12A4
Vlambda3_DPL16__31_
GGGTQLTVLSA 111 SEQ ID NO:143
GGGTQLTVL.. JL7 SEQ ID NO:157

FIG. 2A

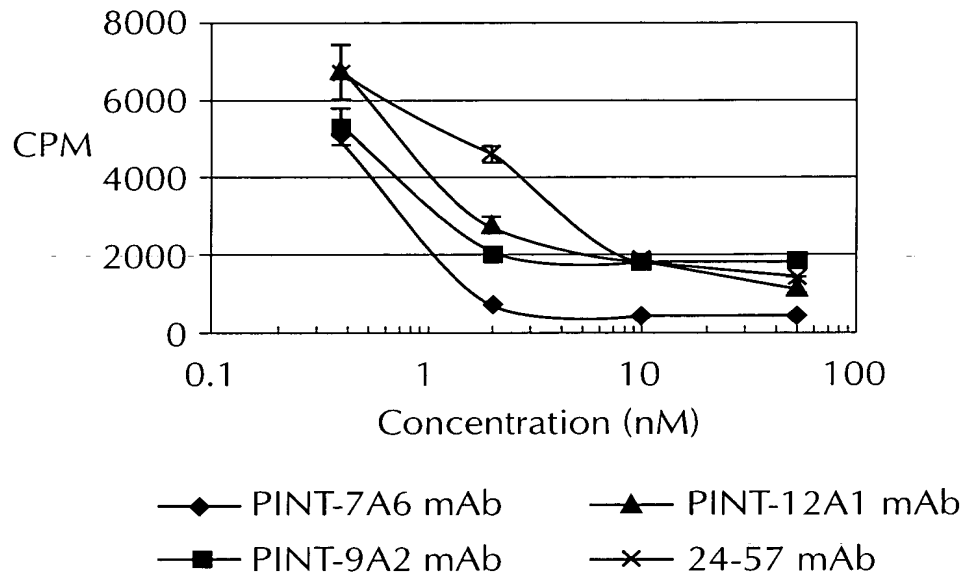
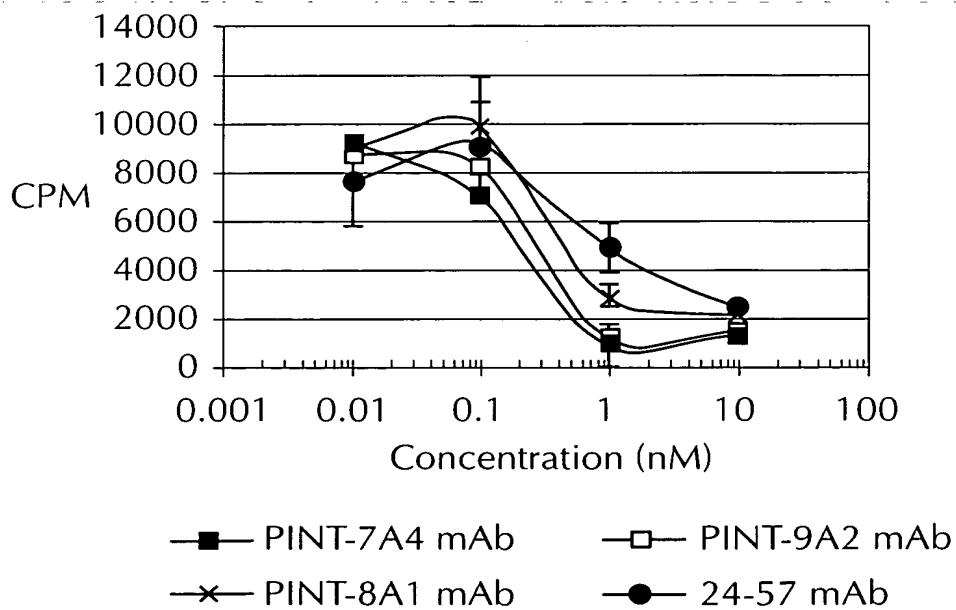


FIG. 2B



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FIG. 3

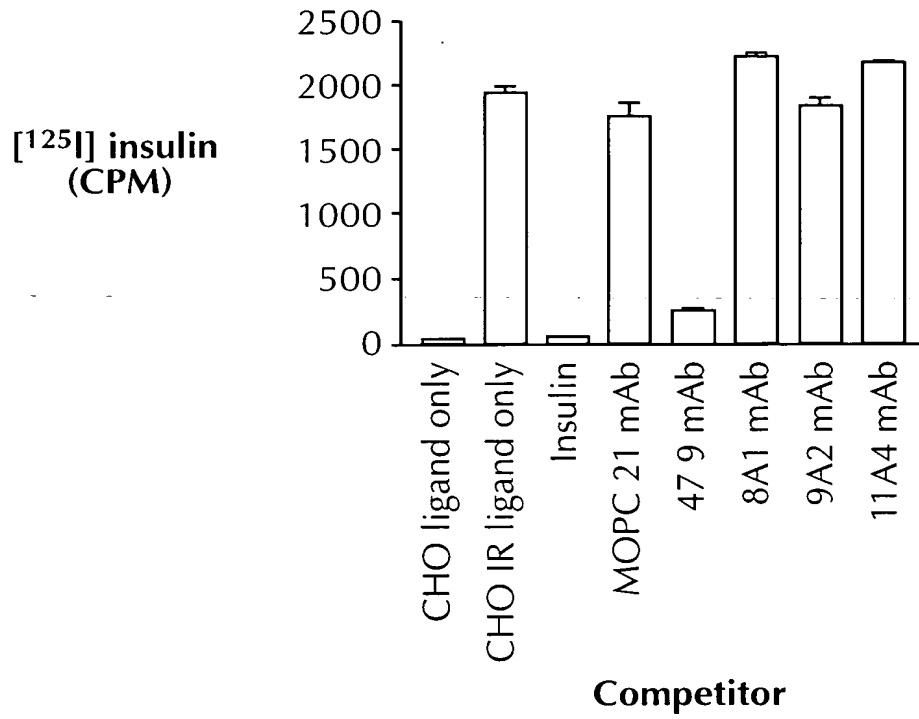
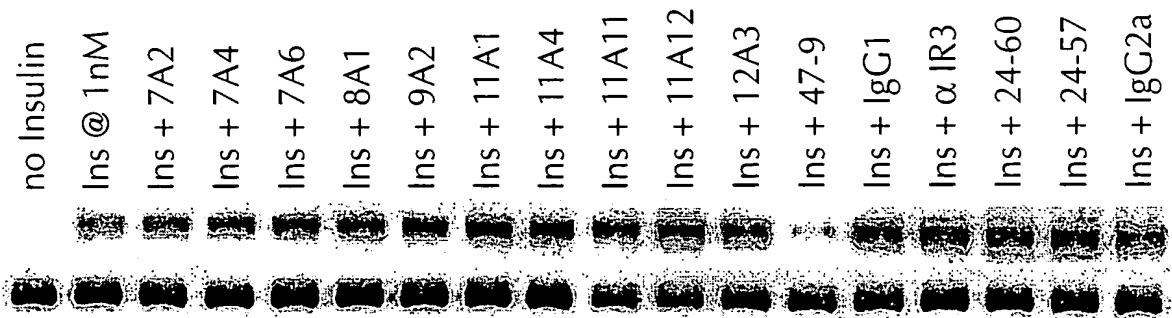


FIG. 4



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FIG. 5

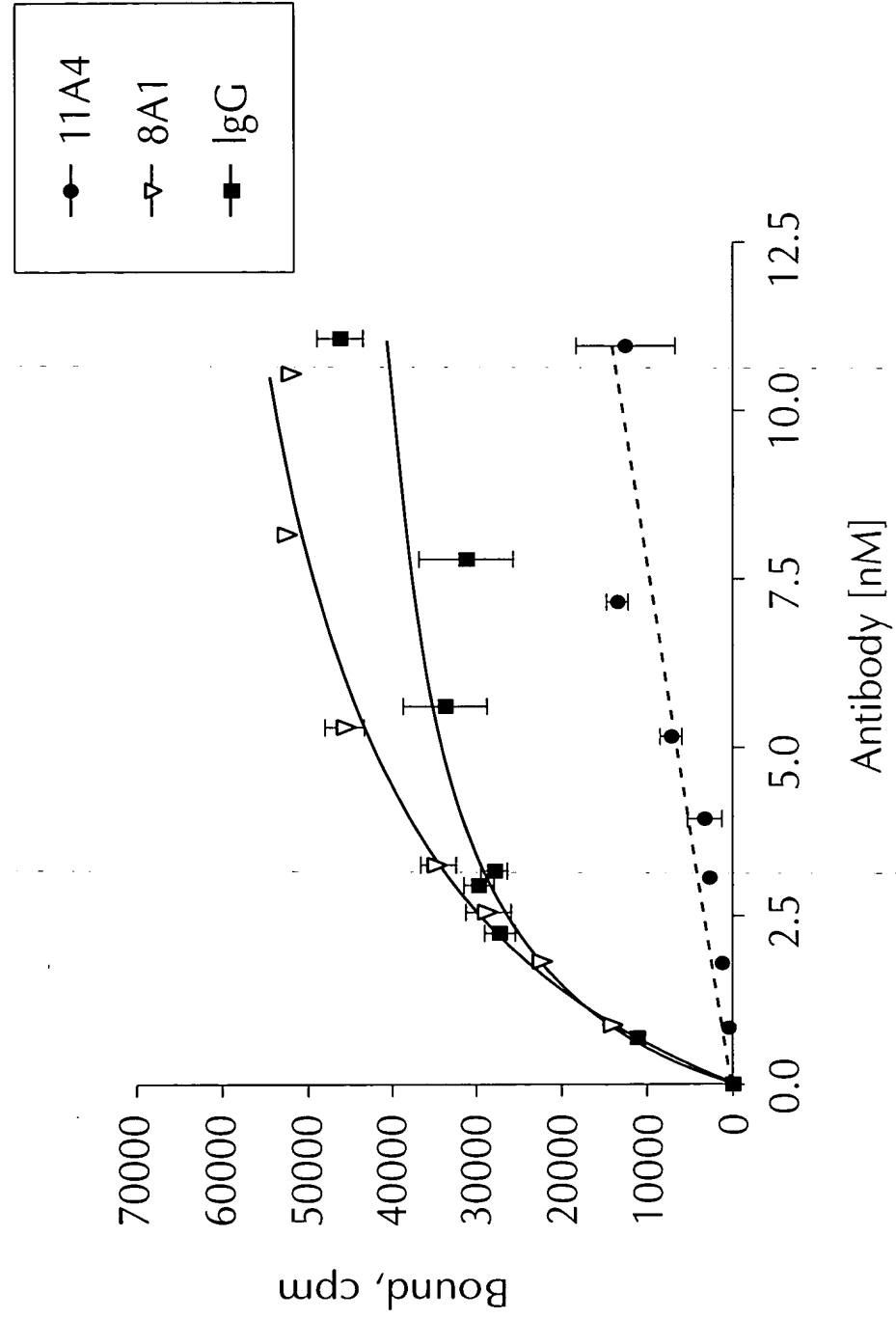


FIG. 6A

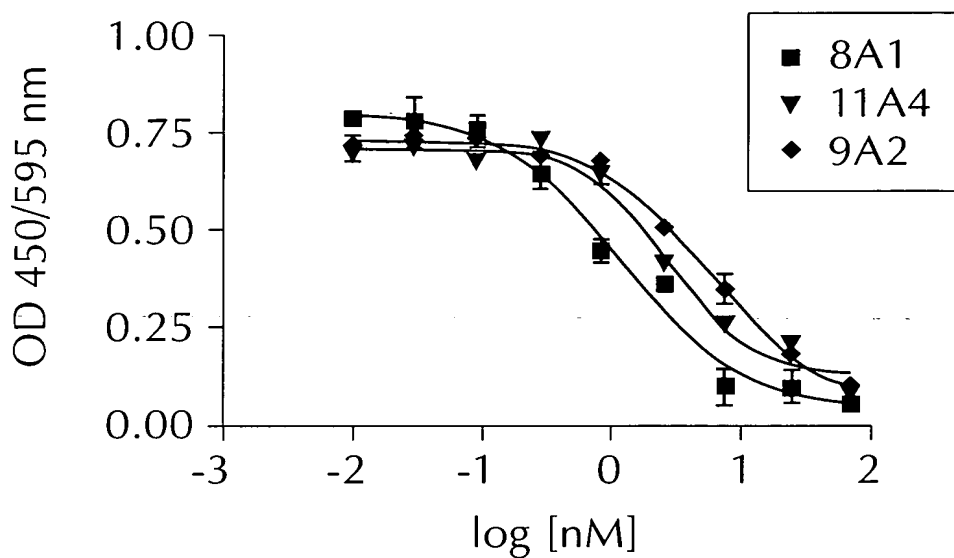


FIG. 6B

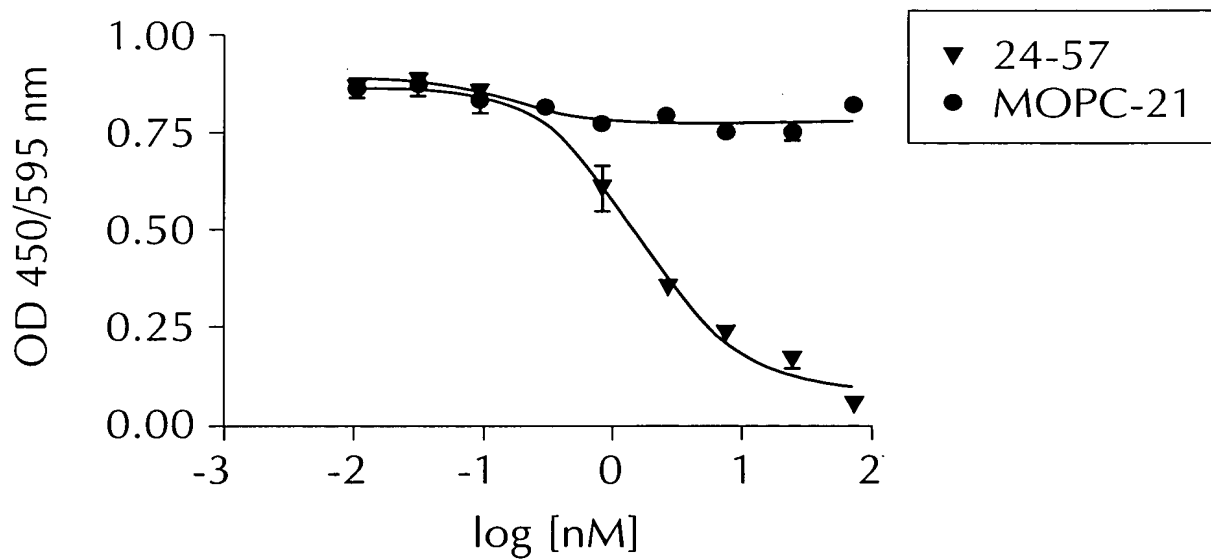


FIG. 7

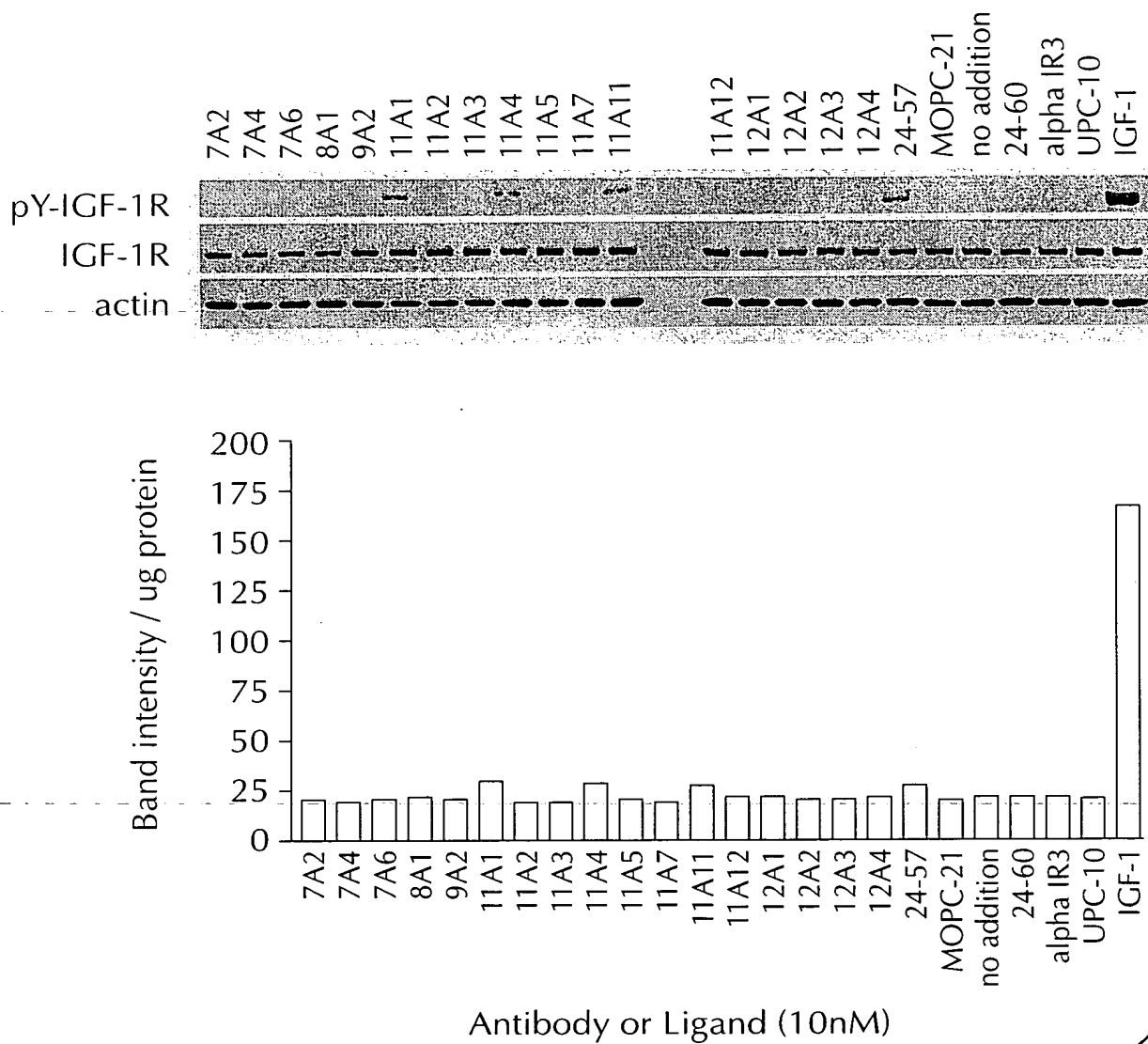


FIG. 8A

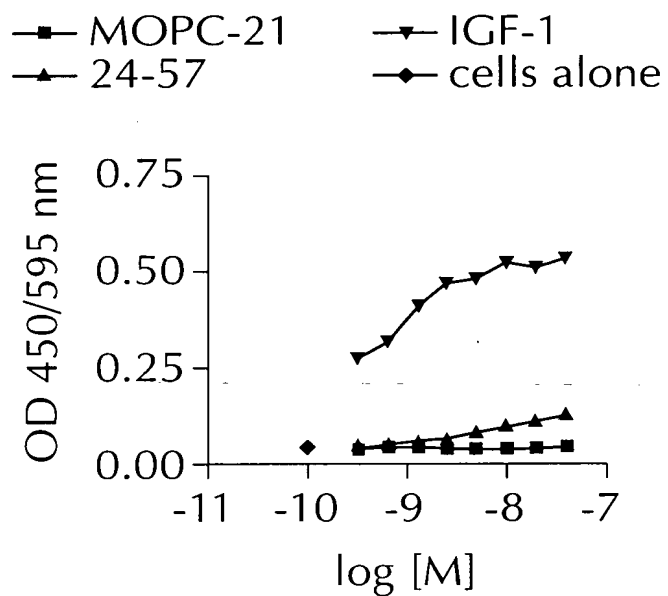


FIG. 8B

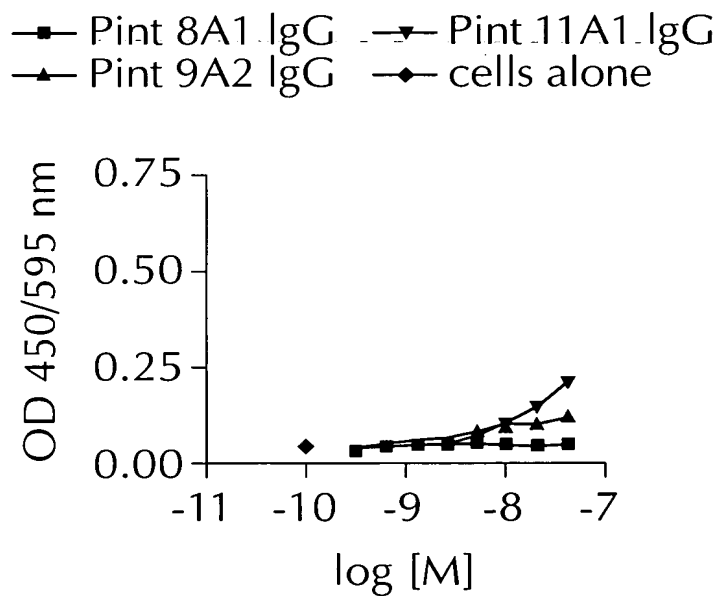


FIG. 8C

■ Pint 7A2 IgG ▼ Pint 7A6 IgG
▲ Pint 7A4 IgG ◆ cells alone

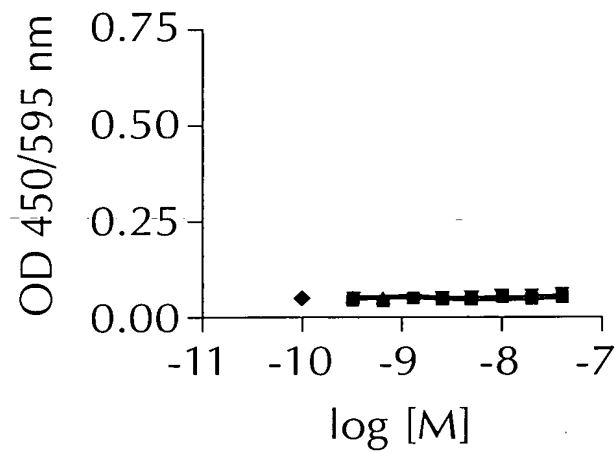


FIG. 8D

■ Pint 11A2 IgG ▼ Pint 11A4 IgG
▲ Pint 11A3 IgG ◆ cells alone

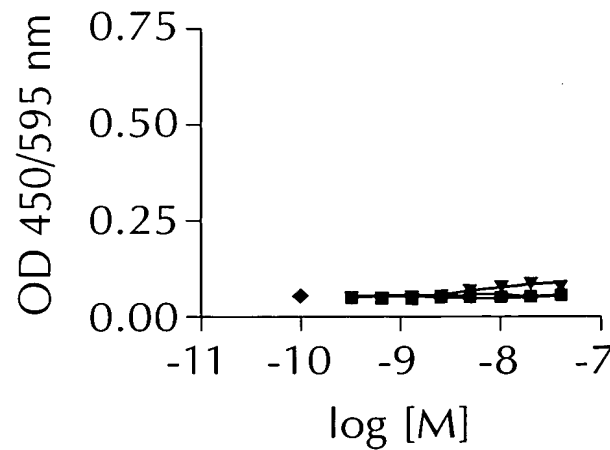


FIG. 9A

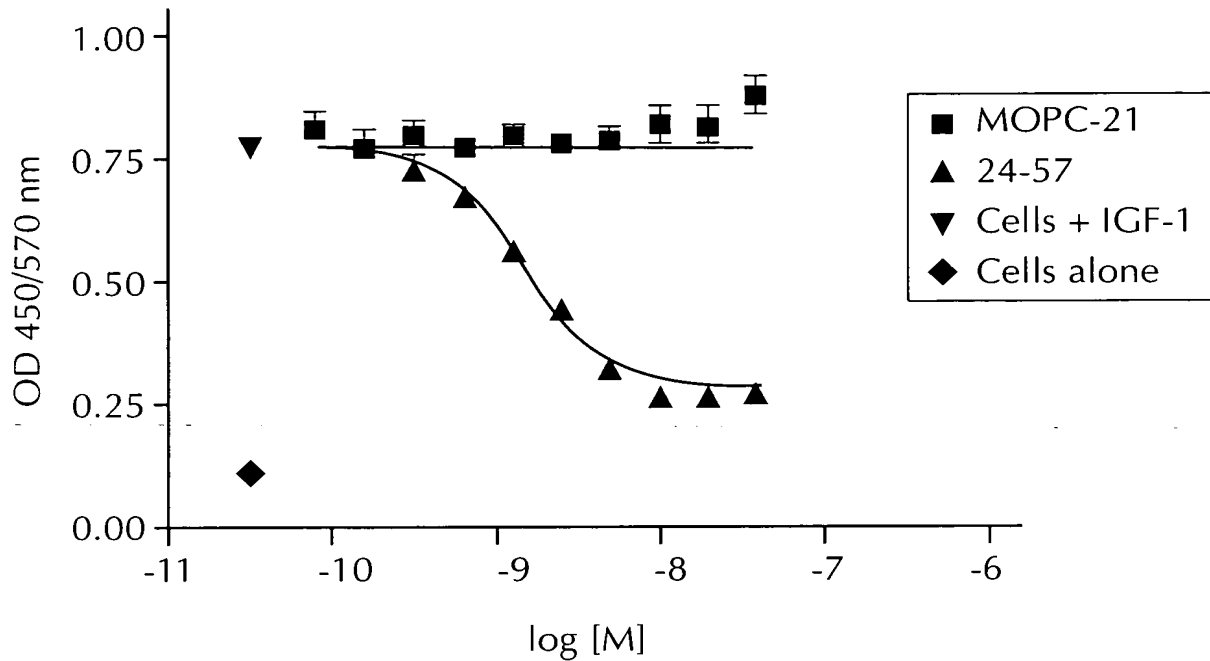


FIG. 9B

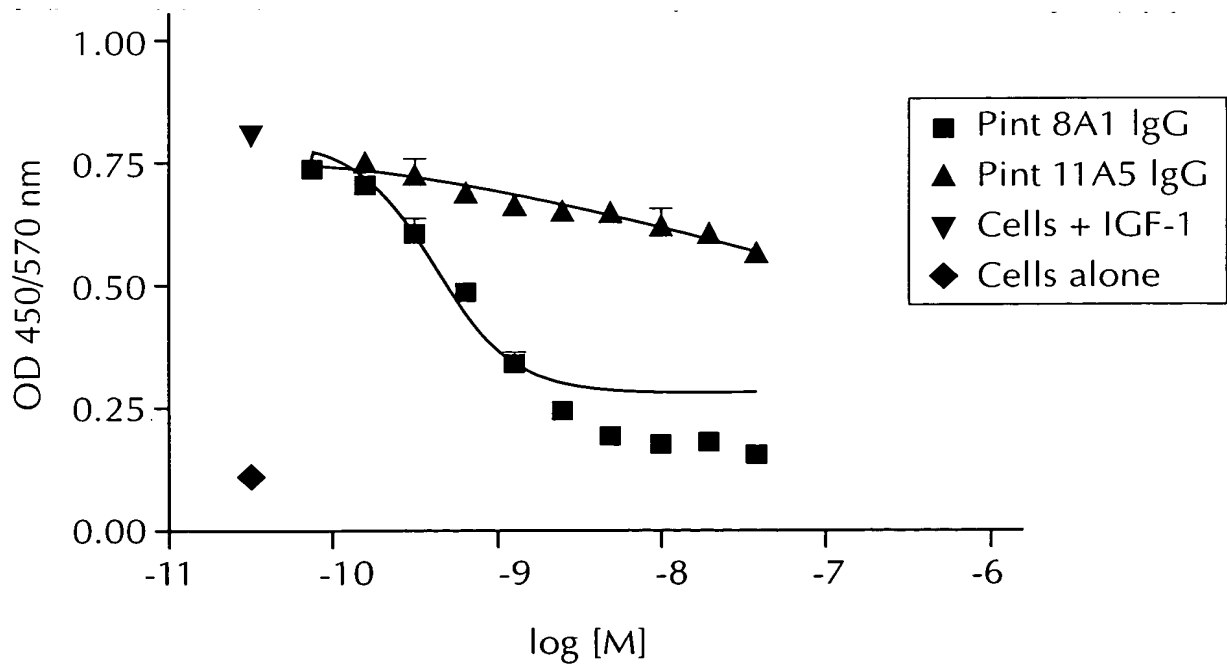


FIG. 9C

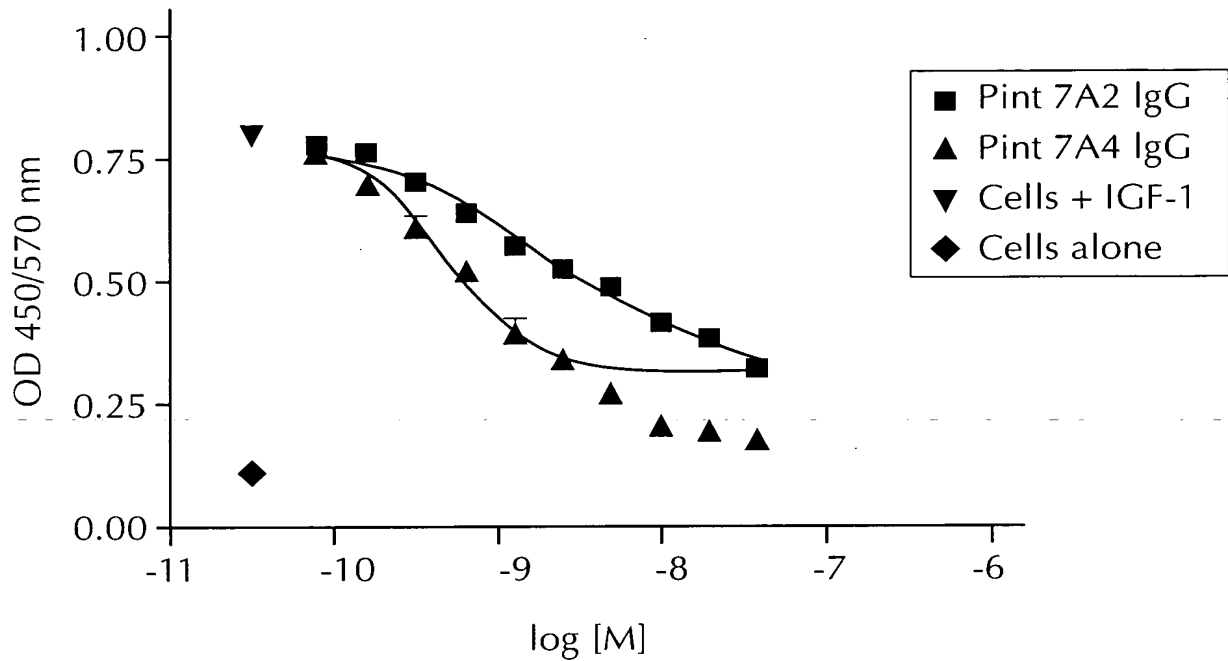


FIG. 9D

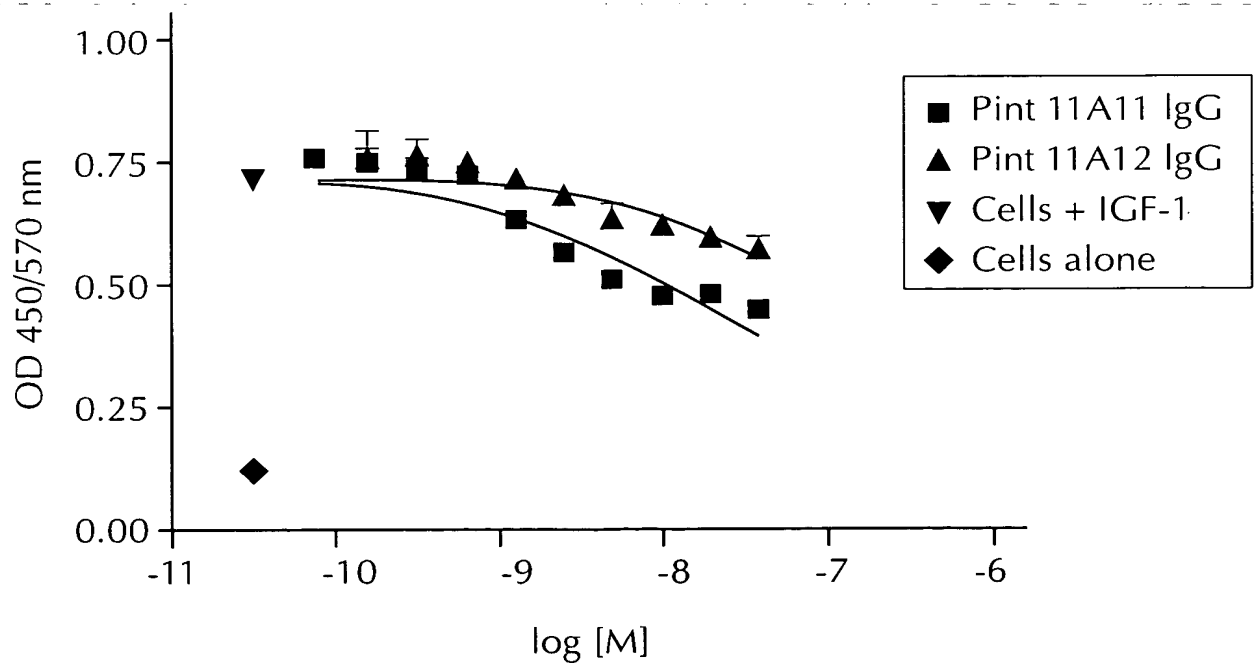


FIG. 10

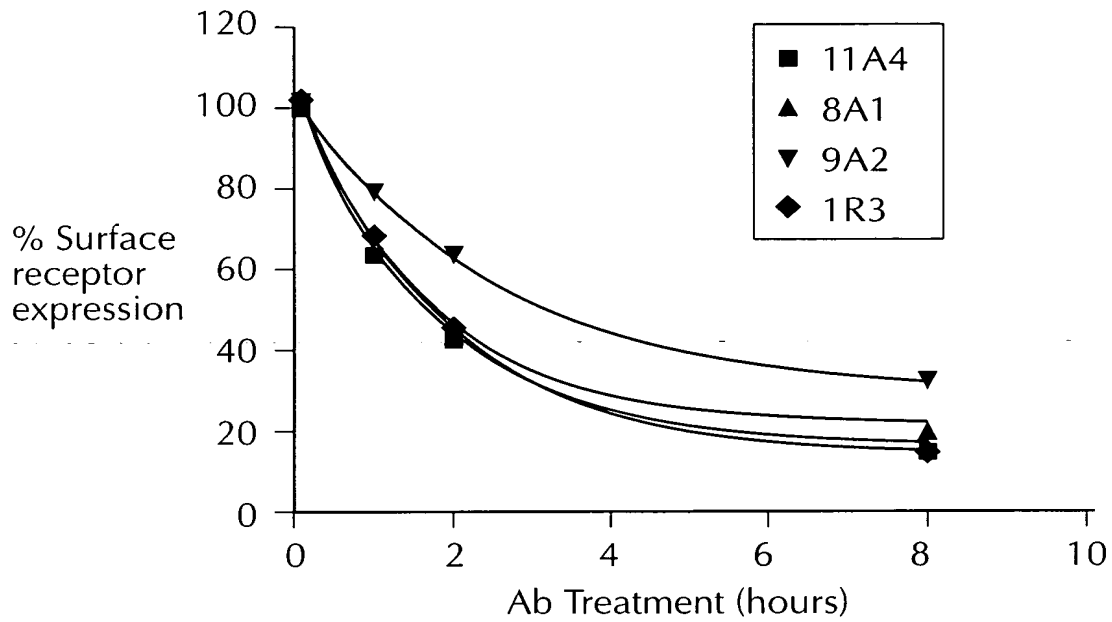


FIG. 13

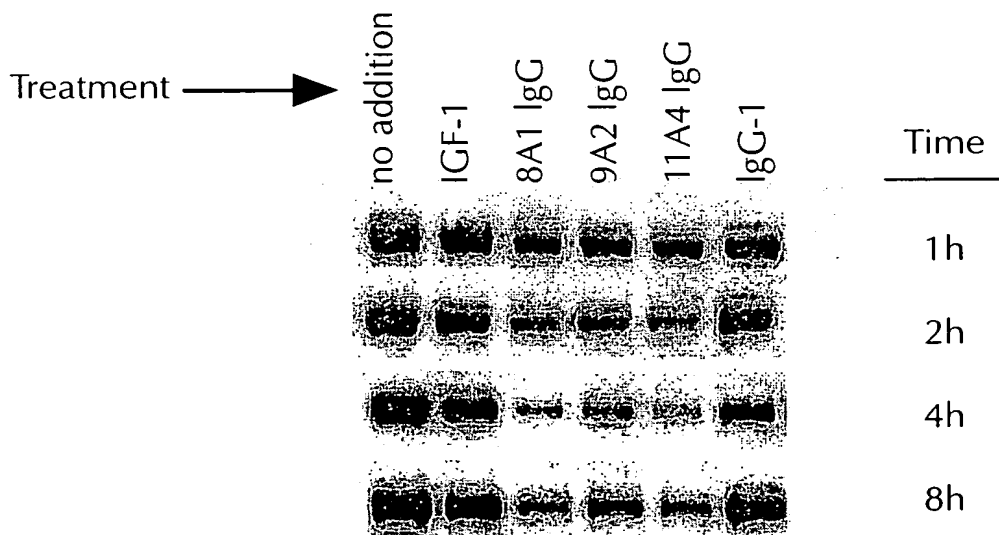


FIG. 11

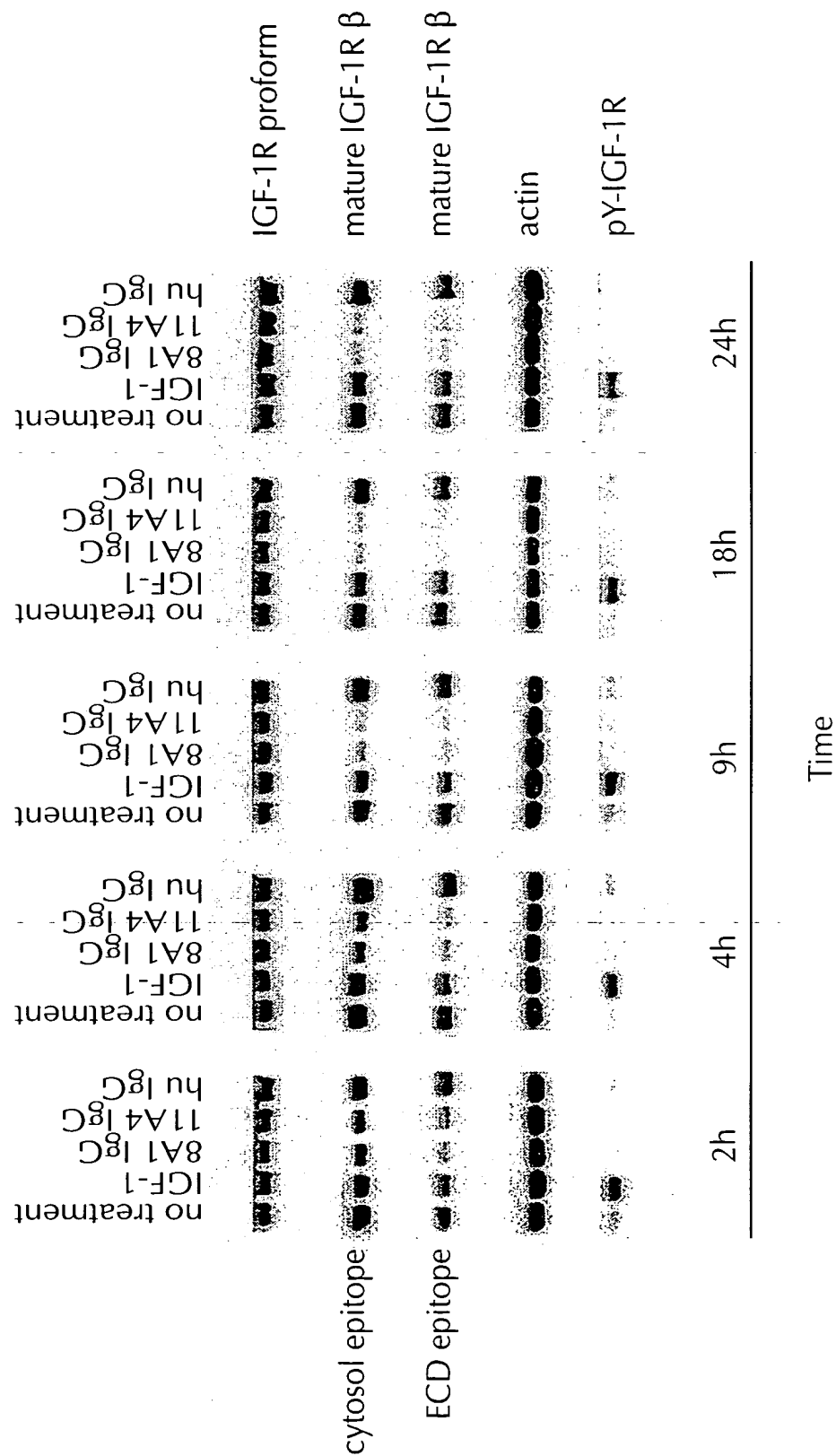


FIG. 12A

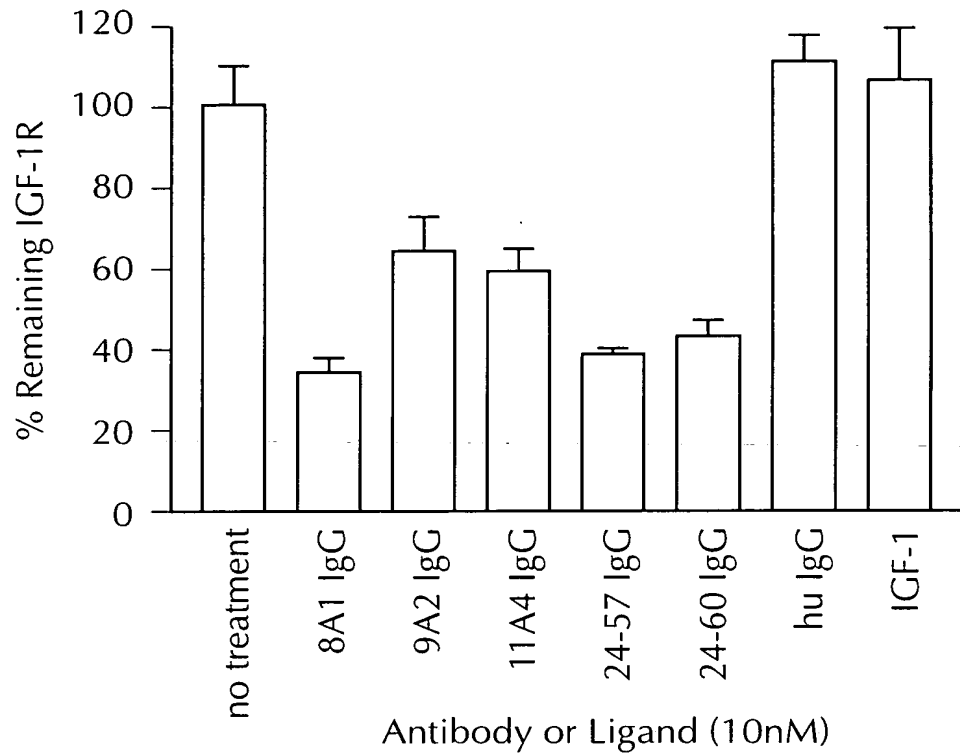


FIG. 12B

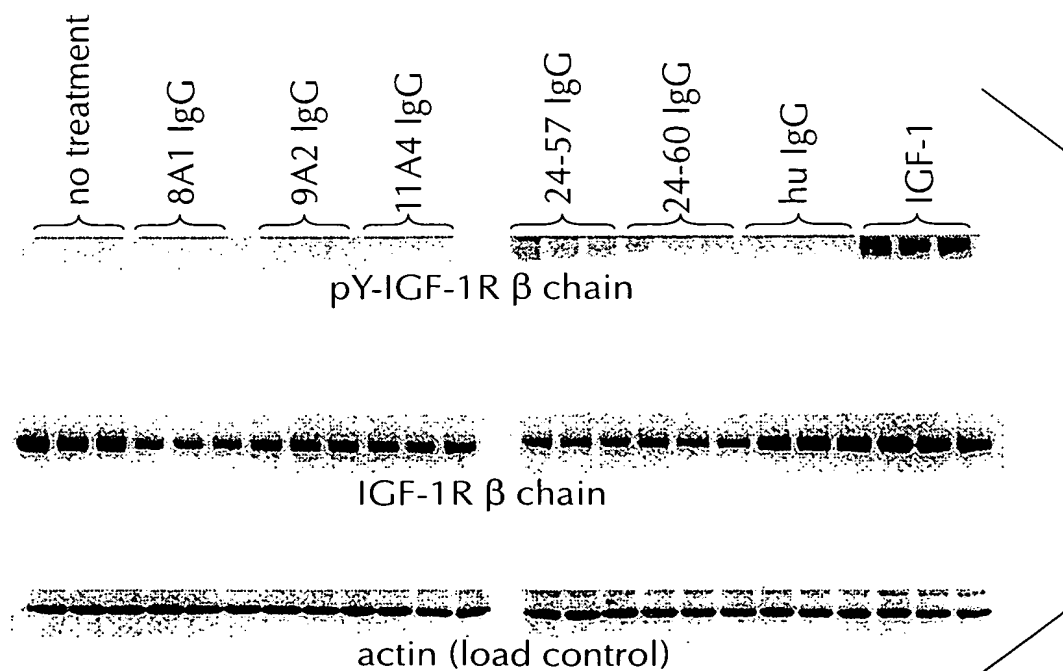


FIG. 14A

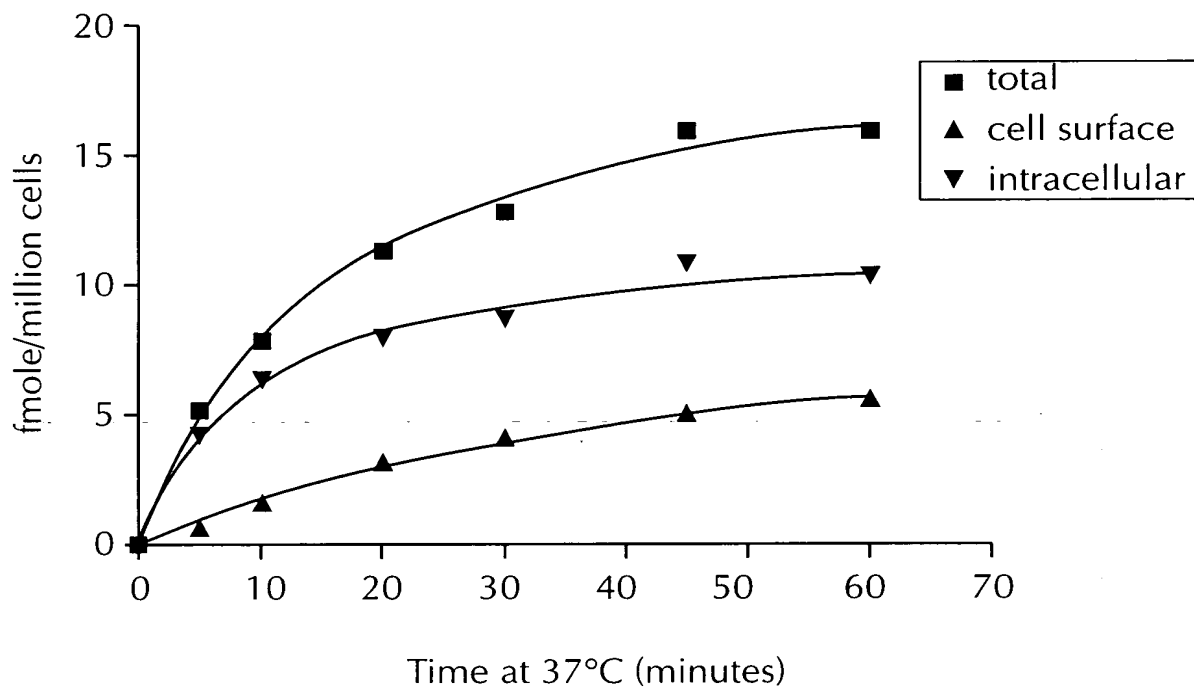


FIG. 14B

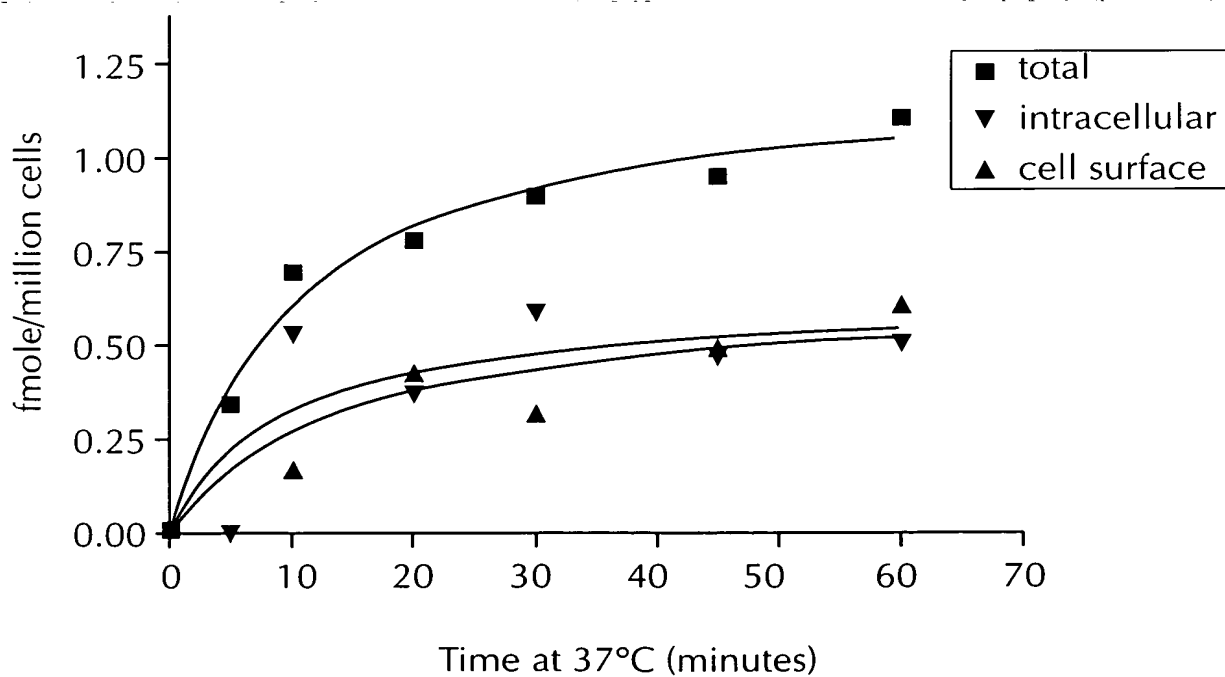


FIG. 14C

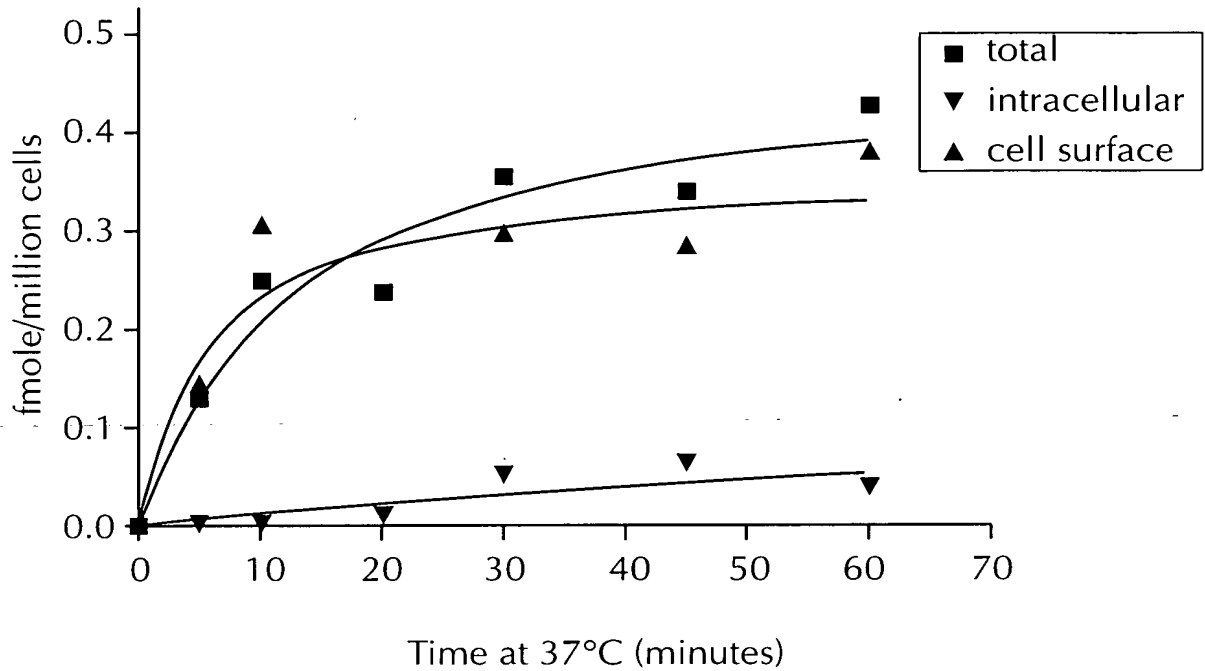


FIG. 14D

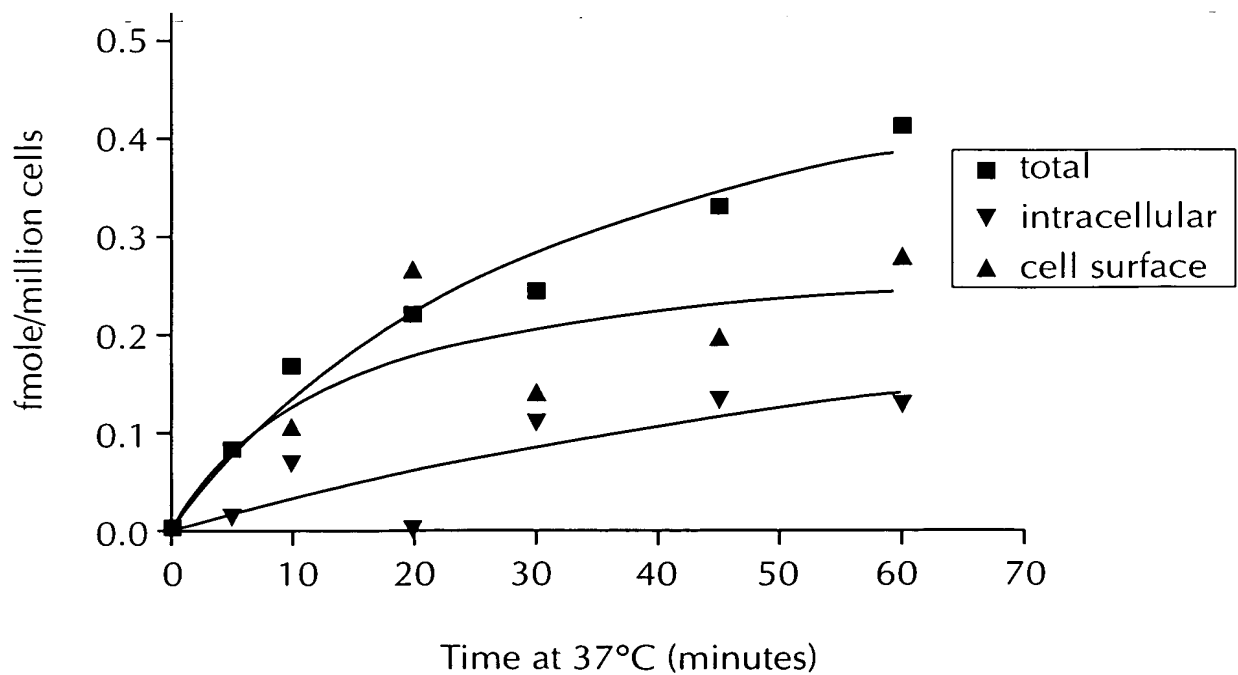


FIG. 15A

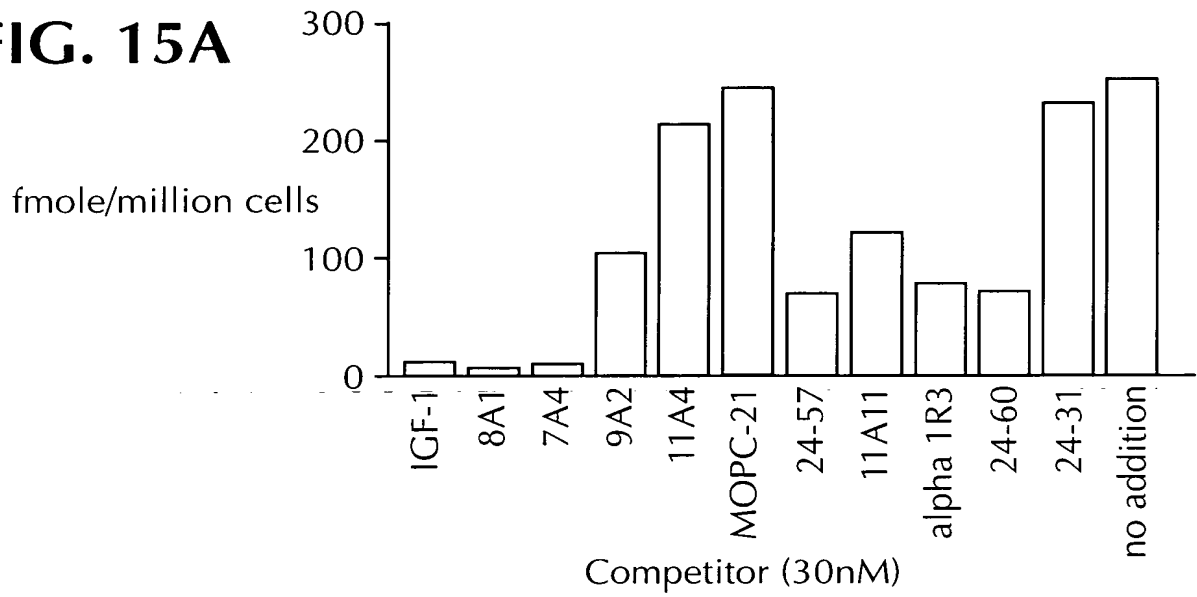


FIG. 15B

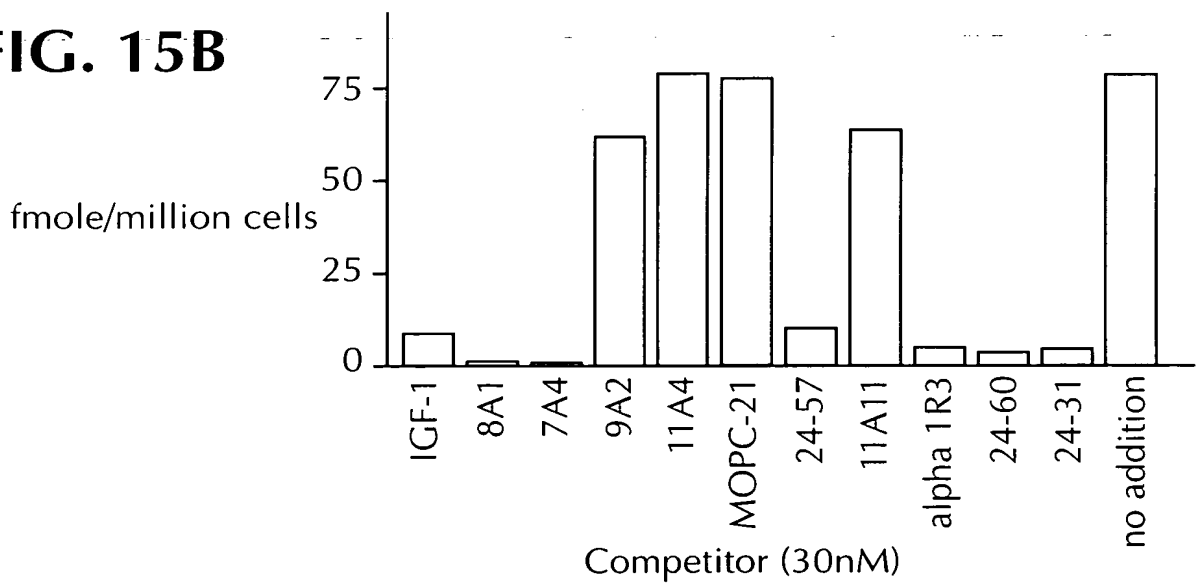


FIG. 15C

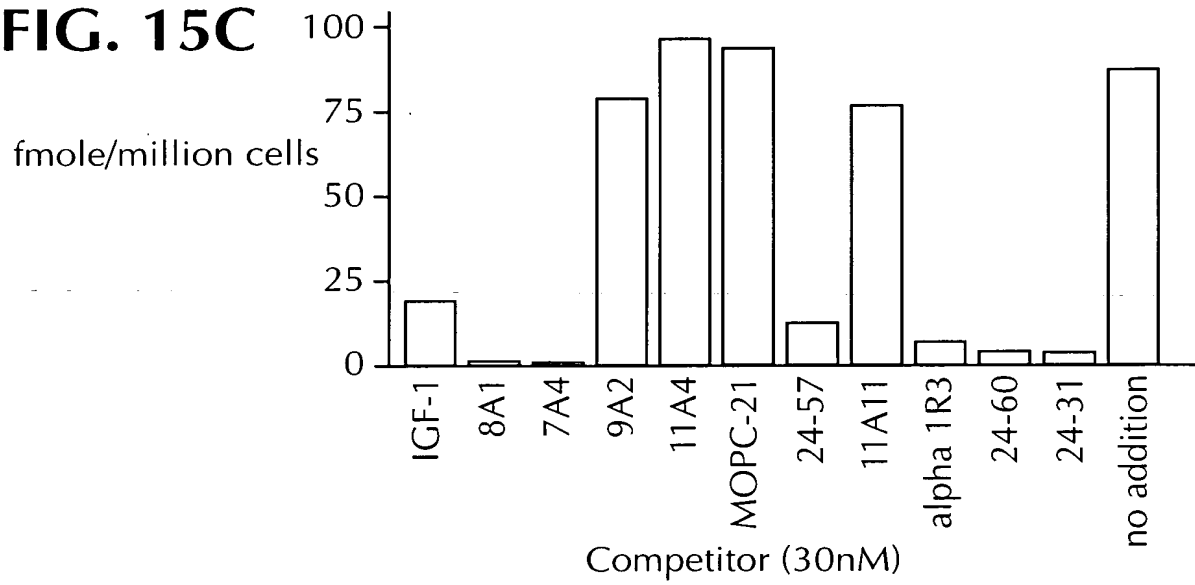


FIG. 15D

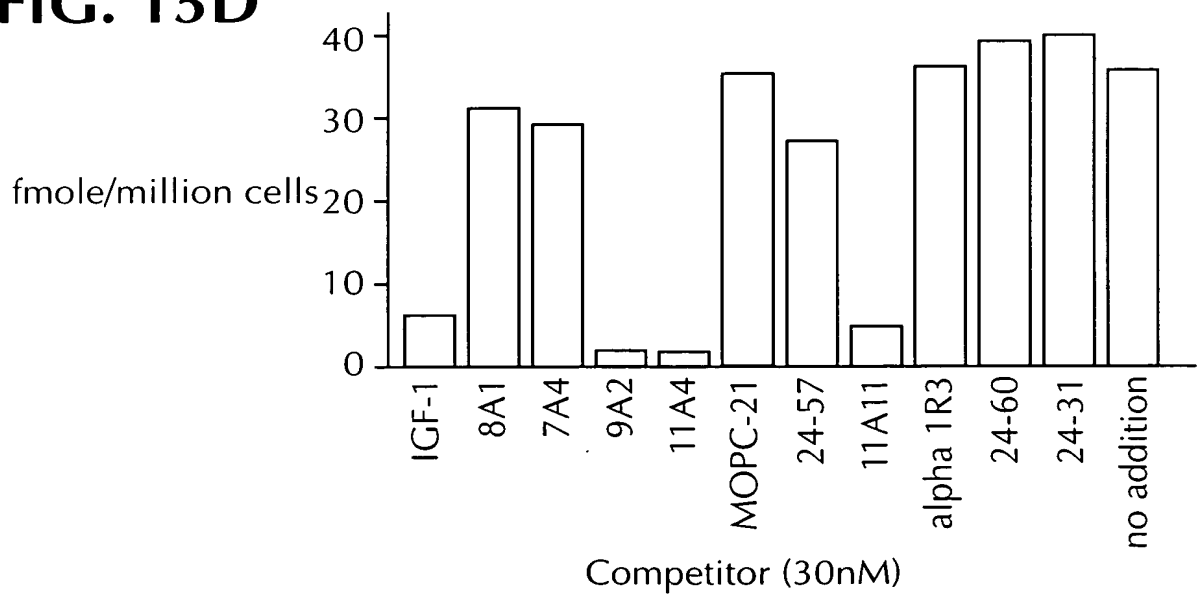


FIG. 15E

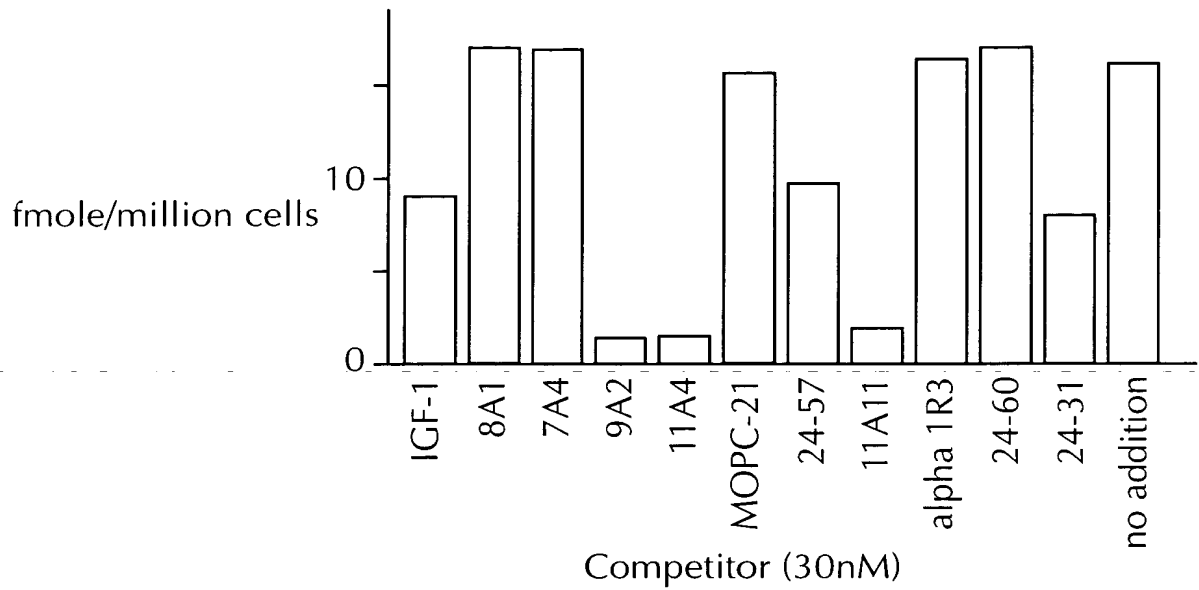


FIG. 15F

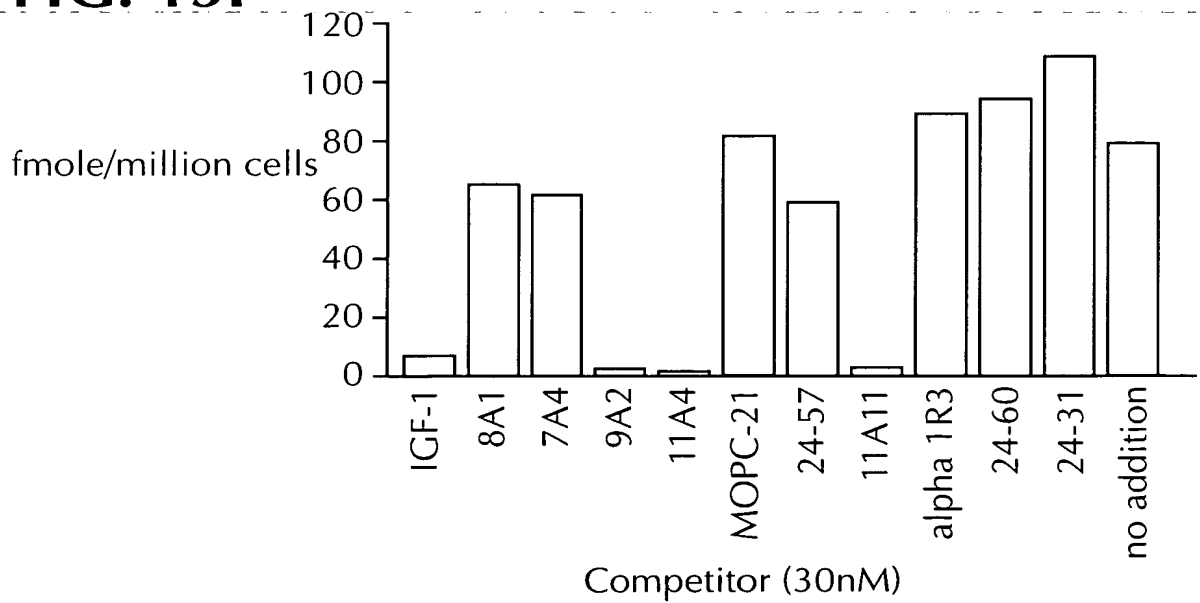


FIG. 16A

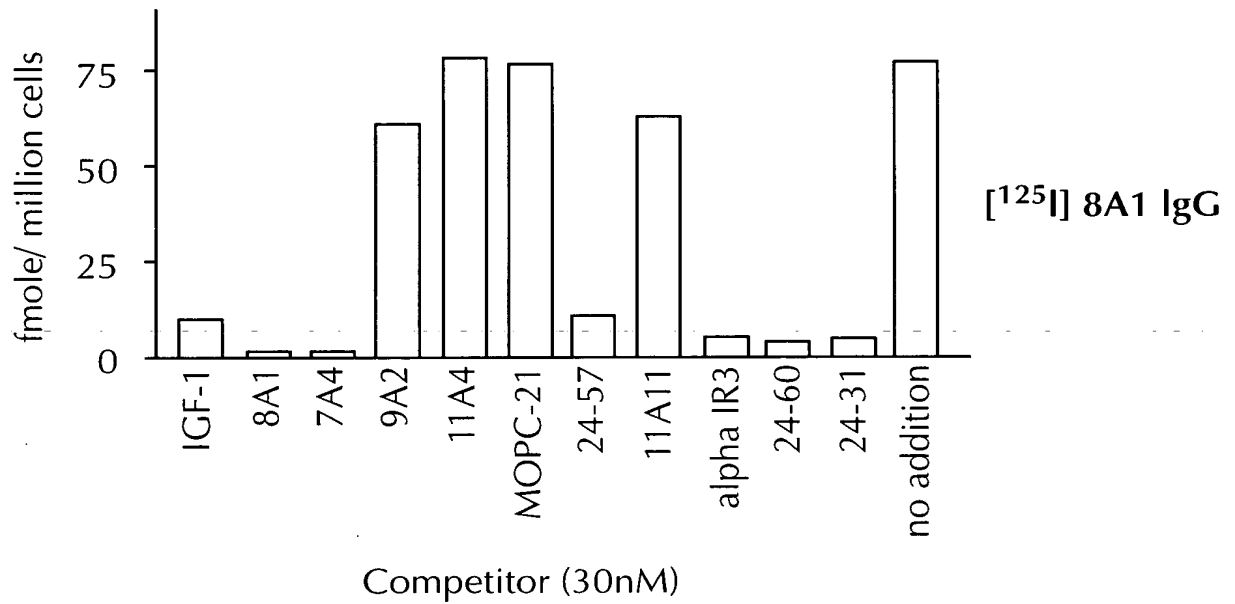


FIG. 16B

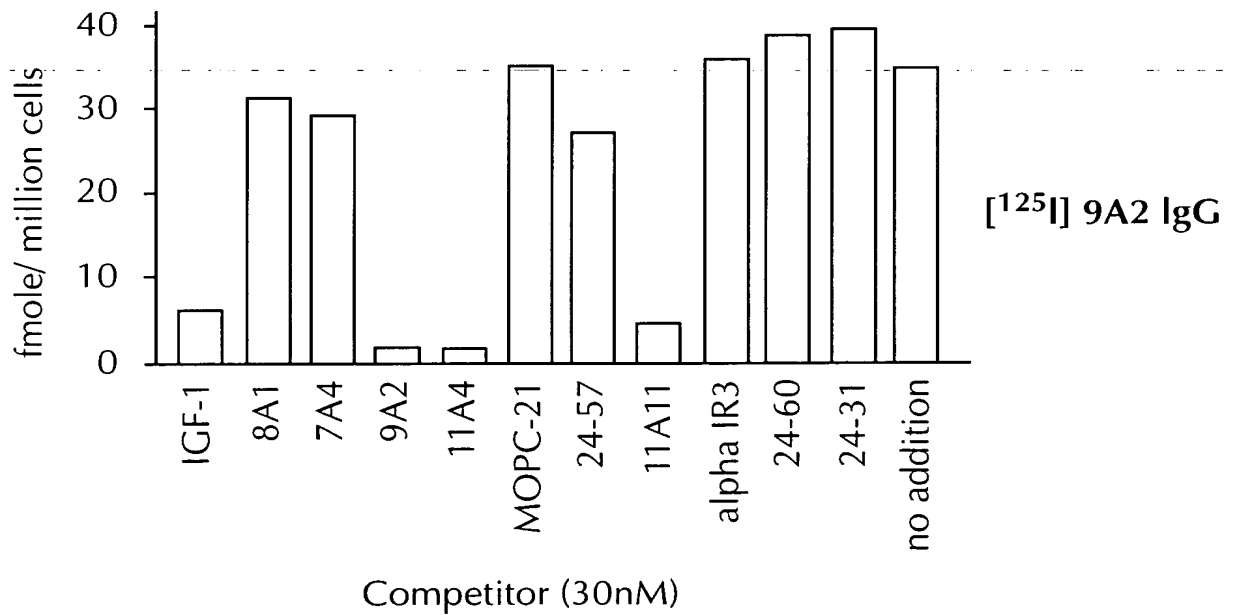


FIG. 16C

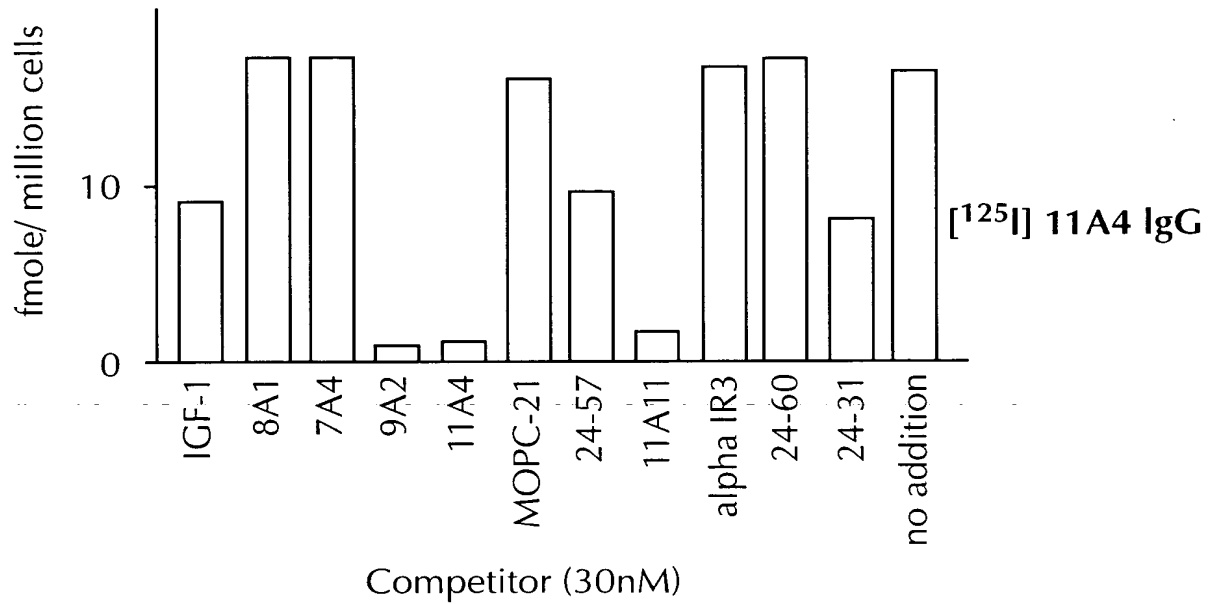


FIG. 17

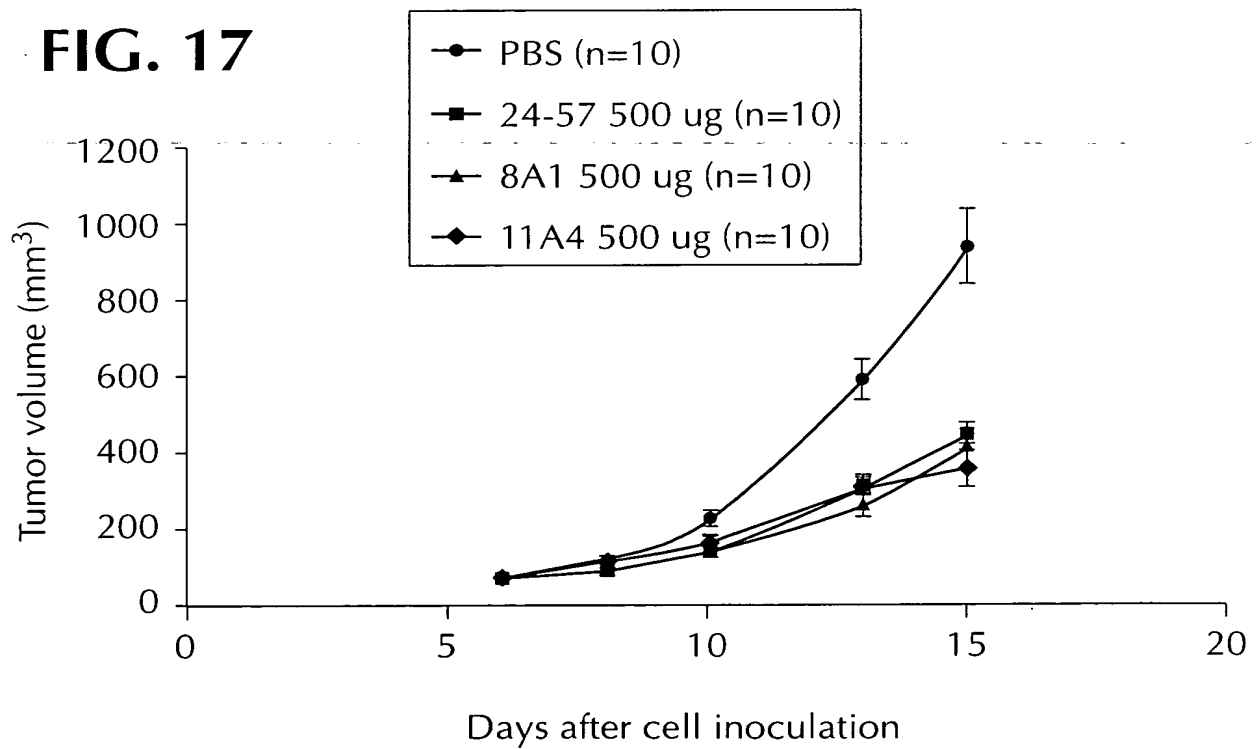


FIG. 18

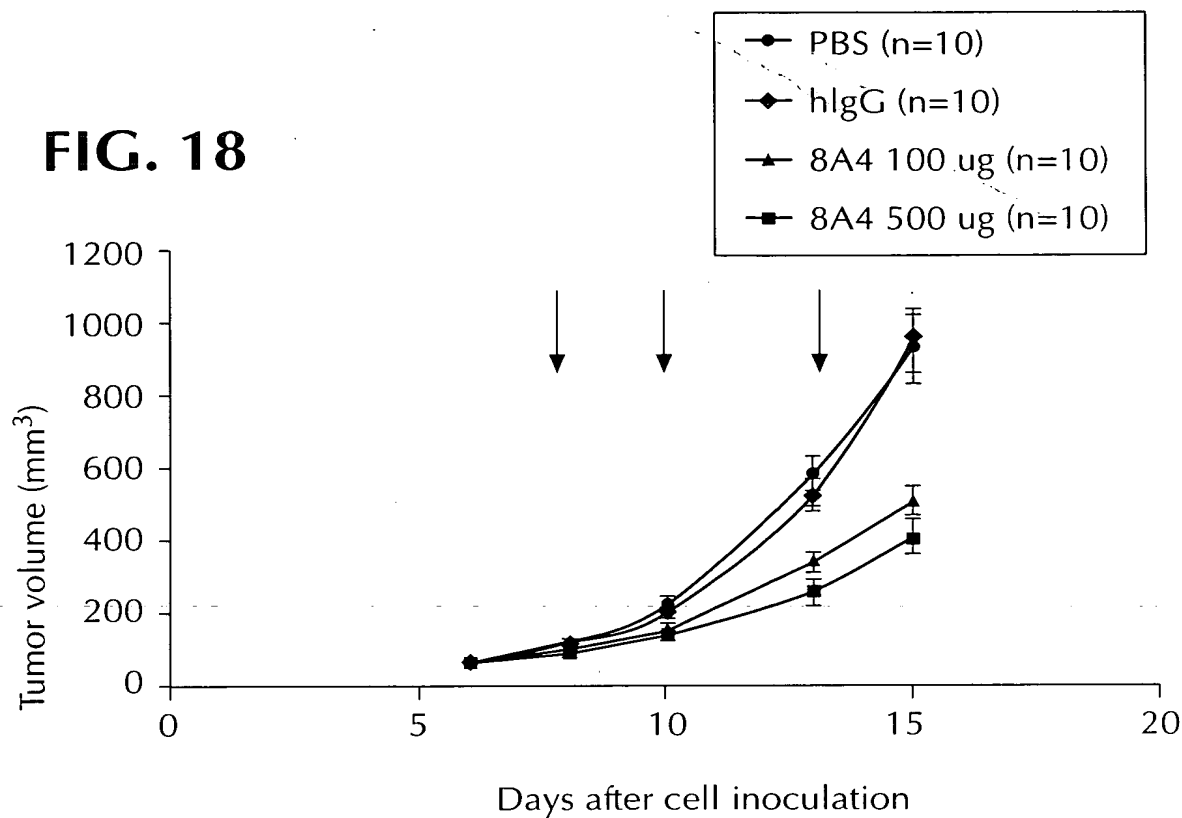


FIG. 19

